



March 18, 2011

Ms. Kimberly Tisa
PCB Coordinator
U.S. Environmental Protection Agency Region 1
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Re: PCB Remediation Plan
Stewart Commons
University of Maine, Orono, Maine

Dear Ms. Tisa:

On behalf of the University of Maine (UMaine), Woodard & Curran has prepared this Self-Implementing On-Site Cleanup and Disposal Plan (SIP) to comply with U.S. Environmental Protection Agency (EPA) requirements under 40 CFR 761.61(a). The former Stewart Commons dining hall located on the UMaine campus in Orono, Maine is scheduled for partial demolition in 2011. This Plan details the proposed remedial approach for polychlorinated biphenyl (PCB) bulk product waste (original caulking) and PCB remediation waste (impacted adjacent materials) present at Stewart Commons.

This submittal includes characterization data, a data usability assessment, a discussion of remedial objectives and cleanup levels, a proposed remedial approach for each PCB-affected media, and a schedule for completing the remediation work.

If you have any comments, questions, or require further information, please do not hesitate to e-mail or call me at the number listed above. Pending your review and approval, UMaine is prepared to commence work in the spring of 2011.

Sincerely,

WOODARD & CURRAN INC.

Jeffrey Hamel, LSP, LEP
Senior Vice President

Project Number 222822.02

Enclosure(s)

cc: Carolyn McDonough, UMaine
Tom Sukeforth, UMaine
Nick Hodgkins, MEDEP



PCB Remediation Plan

Former Stewart
Commons Dining Hall

University of Maine
Orono, Maine

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1. INTRODUCTION

Woodard & Curran has prepared this Self-Implementing On-Site Cleanup and Disposal Plan (SIP) on behalf of the University of Maine (UMaine) to comply with U.S. Environmental Protection Agency (EPA) requirements under 40 CFR 761.61(a). The former Stewart Commons dining hall located on the UMaine campus in Orono, Maine is scheduled for partial demolition in 2011. This Plan details the proposed remedial approach for polychlorinated biphenyl (PCB) bulk product waste (original caulking) and PCB remediation waste (impacted adjacent materials) present at Stewart Commons.

1.1 BACKGROUND

Stewart Commons is a former dining hall located near the northern end of the UMaine campus between Hilltop Road (north), Androscoggin Road (east), Long Road (south), and Hebron Road (west). A Site Locus Map of the surrounding area is provided as Figure 1-1 below. The existing Stewart Commons building, originally constructed in 1963, served as a dining hall until it was vacated in 2006. The one-story building is constructed primarily of concrete and brick masonry in the northern (rear) portion of the building and of concrete, granite, and metal in the southern (front) portion of the building; photographs of each of the building faces are provided at the end of this section. Three main entrance ways are present on the south face of the building, with various side entries present on the east and west faces, and loading dock entrances present on the north face of the building. Surrounding ground surfaces are generally flat in elevation and consist of asphalt or grass-covered soils.

Figure 1-1: Site Locus Map



1.2 CONCEPTUAL SITE MODEL

Certain joint caulking used as part of standard construction practices for masonry buildings and concrete structures erected between the 1950's and late 1970's is known to have been manufactured with PCBs. PCBs were added to caulking for durability, resistance to degradation, and as a softener/plasticizer for application. Due to the porous nature of concrete and other masonry surfaces, PCBs in caulking may penetrate into adjacent materials during application or over time, may leach or weather, and/or may be disturbed during renovations or other work. Production and approved usage of PCBs was halted in the United States in the late 1970s. As indicated above, the Stewart Commons building was constructed during this time period.

In preparation for the Stewart Commons renovation project and based on the date of building construction, interior and exterior caulking materials were inspected and inventoried, and representative samples were collected for PCB analysis. Analytical results indicated that some interior and exterior caulking materials contained PCBs at concentrations greater than 50 parts per million (ppm). Based on these results, adjacent building materials and soils were sampled to determine whether PCBs had migrated from the caulking into these adjacent materials. Detectable concentrations of PCBs were reported in certain adjacent concrete, brick, and soil, and also on polished (non-porous) granite surfaces.

Based on the concentration and distribution of PCBs detected in adjacent materials, it is apparent that the caulking used in original construction was the source of PCBs. In general, concentration gradients identified in the adjacent materials demonstrate a reduction in total PCBs with increasing distance from caulked joints.

Under 40 CFR Part 761, caulking containing PCBs ≥ 50 ppm and select building materials coated or in direct contact with the caulking will be managed as a PCB Bulk Product Waste per 40 CFR 761.62 upon removal from the building and subsequent disposal. Adjacent building materials and soils identified with PCBs > 1 ppm will be managed as PCB Remediation Waste in accordance with 40 CFR 761.61.

1.3 PLAN ORGANIZATION

This SIP is organized into the following sections:

Section 2: Site Characterization

The site characterization section provides a summary of the characterization data that has been collected to date and presents the nature and extent of PCBs.

Section 3: Remediation Plan

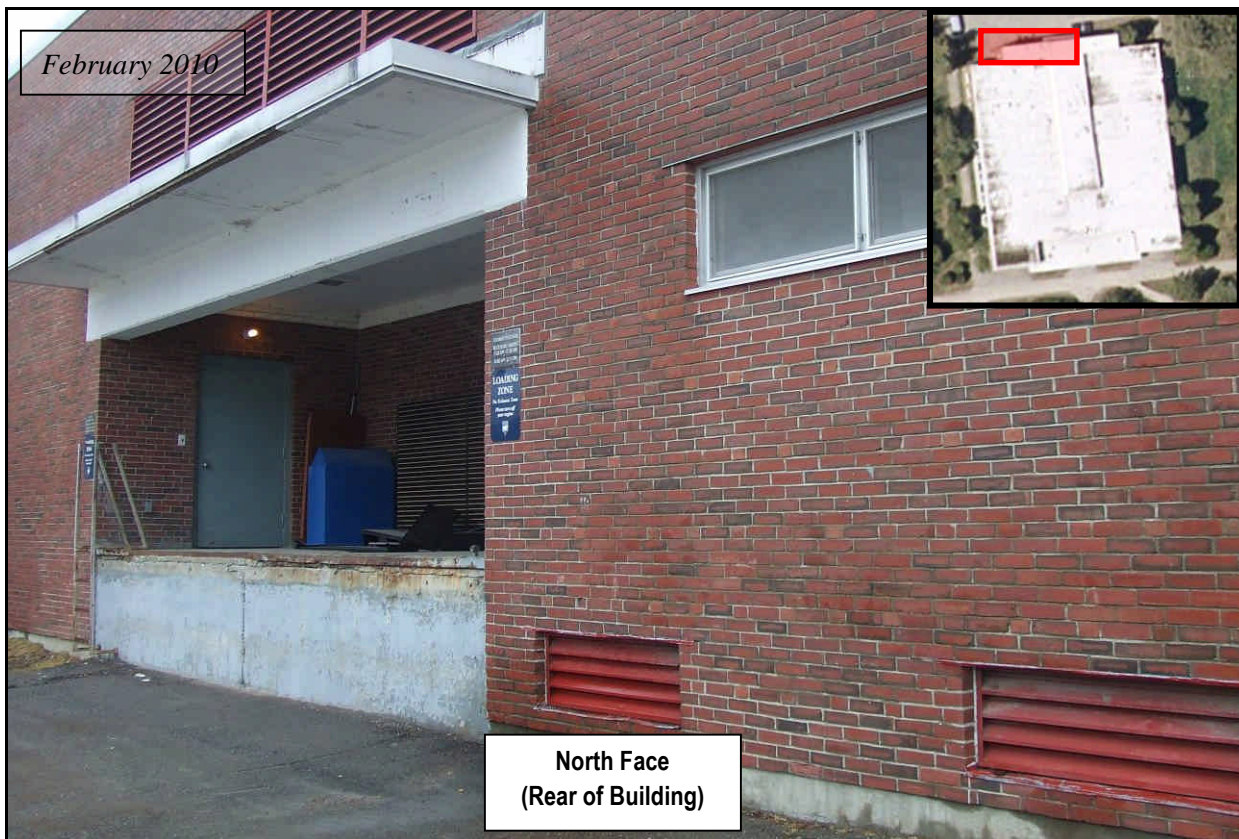
The remediation plan section includes a discussion of the remedial objectives and cleanup levels, the remediation approach for each PCB-affected media, a sequence of activities, and a verification sampling plan.

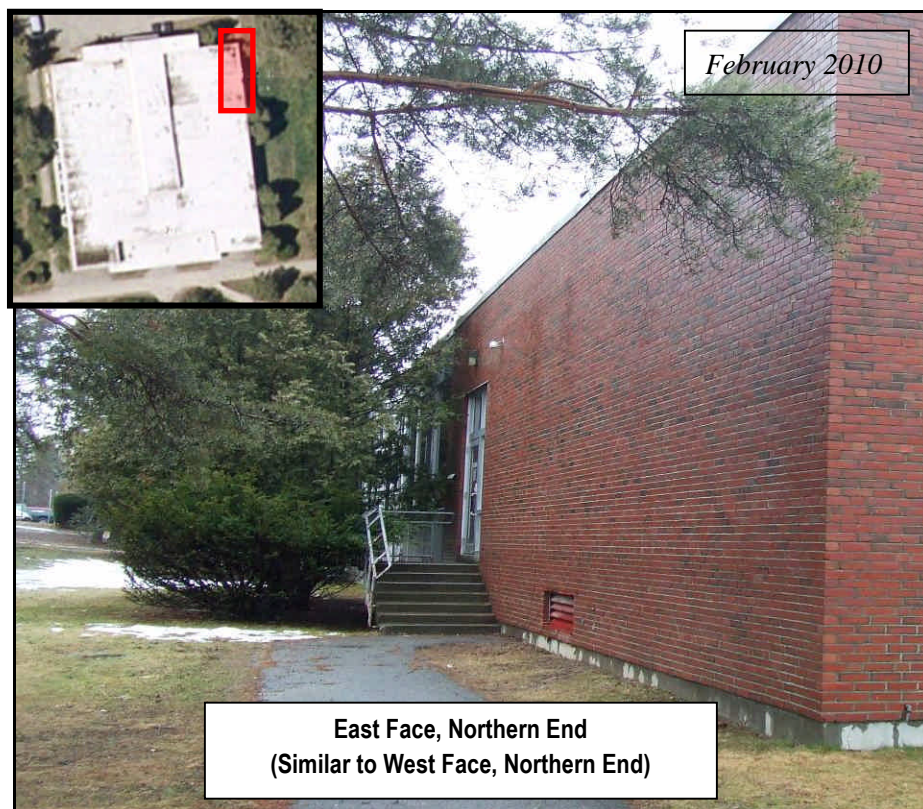
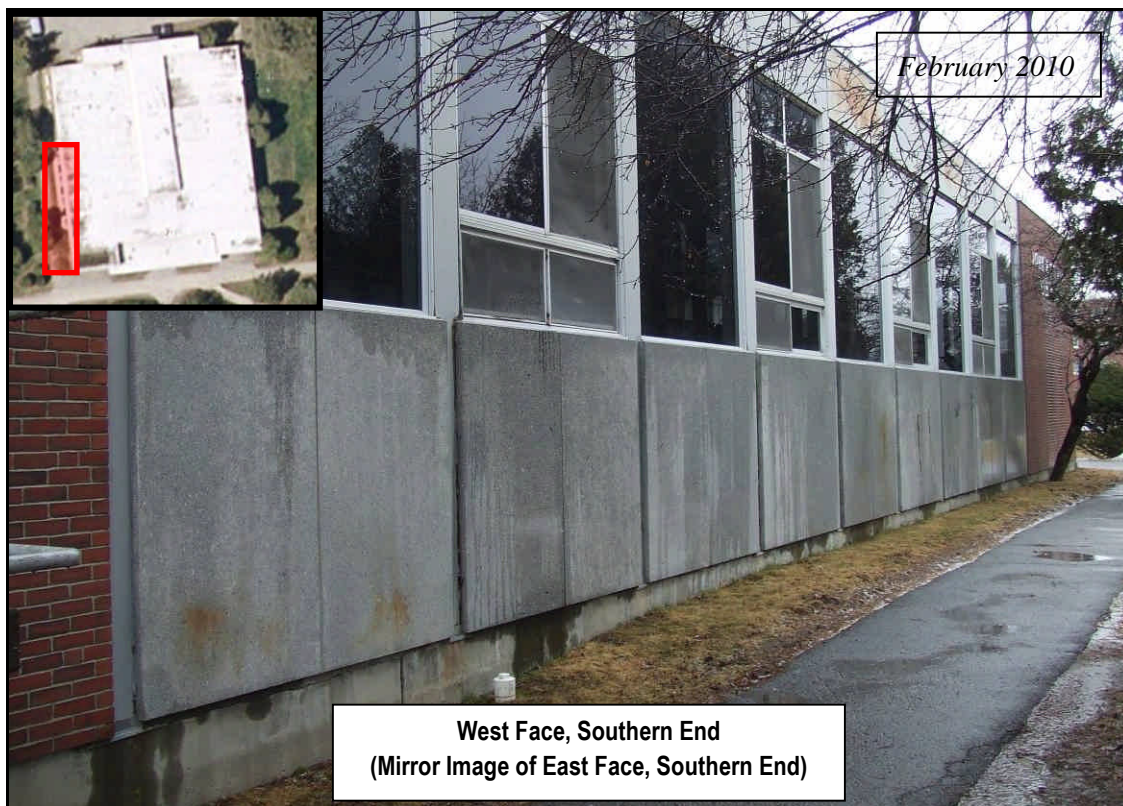
This plan has been prepared to satisfy the requirements of 40 CFR 761.61(a) for the removal and off-site disposal of PCB remediation wastes.

February 2010



February 2010





2. SITE CHARACTERIZATION

From February 2010 to February 2011, Woodard & Curran collected a total of 34 primary samples of caulking and adjacent materials at representative interior and exterior locations, including:

- Caulking (12 bulk samples);
- Concrete (8 bulk samples);
- Brick (2 bulk samples);
- Polished Granite (4 surface wipe samples);
- Perimeter Soil (8 bulk samples).

An analytical data summary is provided as Table 2-3 at the end of this section. In addition to the primary samples outlined above, one field duplicate sample was collected for data validation purposes.

2.1 SAMPLE COLLECTION AND ANALYSIS METHODS

Reusable sampling equipment was decontaminated prior to use and between each sample location using an initial gross removal to remove any visible material or debris followed by a detergent scrub, a distilled or de-ionized water rinse, and a final wipe down. Sampling methods particular to each sample media are described below.

- Caulking samples were collected by cutting and scraping the caulking from the joint with hand tools. If adjacent media (e.g., concrete or a foam backer rod) was inadvertently removed in the process of sample collection, this media was physically removed from the caulking before the appropriate volume of the sample media was placed in its sample container.
- Concrete and brick sampling was conducted in general accordance with the USEPA Region I *Draft Standard Operating Procedure for Sampling Concrete in the Field* (December 1997) using a hammer drill. Holes were made into the concrete to a depth of 0.5 inches and spanned a length necessary to achieve the required sample volume. After the holes were made, the bulk material was scooped from the surface using hand tools and placed in the appropriate sample containers.
- Wipe samples were collected in accordance with the standard wipe test as defined in 40 CFR 761.123. Wipe samples were collected from the prescribed 100 cm² area using a laboratory prepared hexane-soaked gauze pad.
- Soil samples were collected in accordance with standard environment practices for collecting soil samples from 0-3 inches below ground surface with a stainless steel hand trowel.

Bulk media and surface wipe samples were logged on standard Chain-of-Custody (COC) forms and stored on ice for delivery to Analytics Environmental Laboratory of Portsmouth, New Hampshire. Samples were extracted using USEPA Method 3540C (Soxhlet Extraction) and analyzed for PCBs using USEPA Method 8082. The complete laboratory analytical reports for the characterization data are provided in Appendix A of this report.

2.2 SITE CHARACTERIZATION RESULTS – INTERIOR BUILDING MATERIALS

The results of the characterization are presented in the following sections by sample media.

2.2.1 Interior Caulking

As part of the planning activities for the overall building renovation project, an inventory of interior caulking was conducted as part of the building material classification survey. Two types of visibly distinct interior caulking were observed at the window/door units on the south face of the building, where two entries (Southeast and Southwest) are composed of a single window/door unit, and a third entry (South Center) is composed of inner and outer window / door units separated by a breezeway (see interior photos on the following page). A summary of the caulking materials by type and total estimated quantities is presented below:

Table 2-1: Interior Caulking Inventory

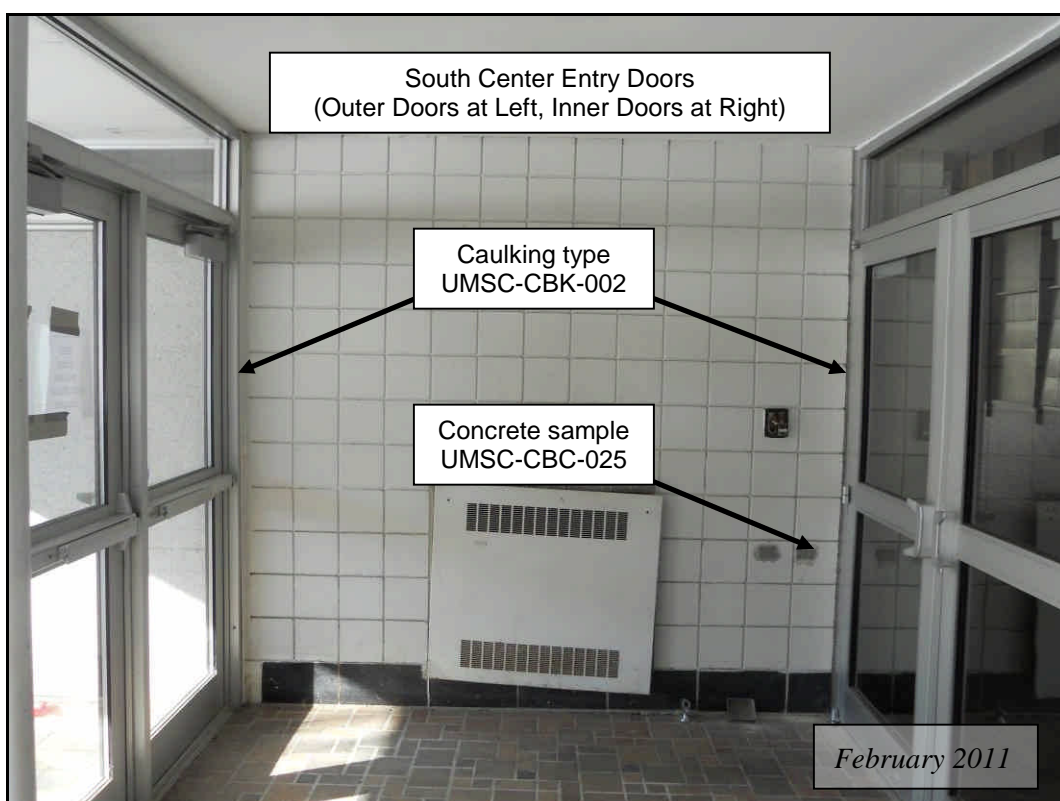
Caulking Type and Location	Estimated Quantity
Caulking type represented by UMSC-CBK-001 ; present at metal frames to interior concrete wall joints.	Southwest entry, interior side of window / door unit = 67 linear feet (l.f.) South Center entry, interior of inner breezeway doors = 42 l.f. Southeast entry, interior side of window / door unit = 67 l.f. Total amount = 176 l.f.
Caulking type represented by UMSC-CBK-002 ; present at metal frames to concrete wall joints interior to the South Center entry breezeway (outside of inner doors and inside of outer doors).	South Center lobby breezeway doors = 82 l.f. Total amount = 82 l.f.
Total Interior Caulking = 258 linear feet	

Based on the inventory conducted, samples of caulking were collected to determine whether or not PCBs were present in these materials for waste disposal considerations. One sample was collected from each type of interior caulking observed. Analytical results indicated that PCBs were present at concentrations ≥ 50 ppm in sample UMSC-CBK-001 (7,680 ppm) and UMSC-CBK-002 (171 ppm) as summarized in Table 2-3. Based on these results, the volume of caulking presented in Table 2-1 has been assumed to contain PCBs at concentrations ≥ 50 ppm.

No interior caulking materials were observed at locations other than the south face entries described in this section.

2.2.2 Interior Concrete Blocks

The building materials adjacent to the interior caulking described above consist of concrete block walls adjacent to each of the three south face entryways. The block walls are each a continuous unit spanning from the interior of the building to the inside of the South Center breezeway, and continues from the building interior to the building exterior at the Southeast and Southwest lobbies.



To characterize the potential PCB impacts to the interior portions of the concrete block walls, samples were collected at various distances from the caulked joints containing PCBs ≥ 50 ppm. Samples were collected from the western interior block wall adjacent to caulking sample UMSC-CBK-001 and from the western wall of the breezeway between the two sets of South Center entry doors adjacent to caulking sample UMSC-CBK-002. Initial samples at each location were collected at 6 inches from the joint.

The concrete sample collected 6 inches from caulking type UMSC-CBK-002 in the South Center entry breezeway was reported with PCBs at 0.391 ppm. Because this result met the 1 ppm unrestricted use cleanup level, the extent of PCBs in concrete block walls adjacent to caulking type UMSC-CBK-002 (within the breezeway) was delineated at a lateral distance of 6 inches from the joint.

The concrete sample collected 6 inches from caulking type UMSC-CBK-001 at the interior of the building on the west wall was reported with PCBs > 1 ppm at 3.25 ppm. A second sample was collected at a distance of 12 inches from the joint and reported a decrease in PCB concentrations to a level of 2.19 ppm. After receiving the 12 inch sample result, a plan was developed to collect four samples at a distance of 24" from this and three other similar joints to gain a thorough understanding of the migration from this caulking type given the potential volume of concrete and associated disposal costs for PCB impacted materials. Samples were collected from four concrete block walls where this caulking type was present (east and west walls of both east and west lobbies). These results were reported with PCBs ≤ 1 ppm in all four samples, and the extent of PCBs in concrete block walls adjacent to caulking type UMSC-CBK-001 was delineated at a lateral distance of 24 inches from the joint.

2.3 SITE CHARACTERIZATION RESULTS – EXTERIOR BUILDING MATERIALS

The results of the characterization are presented in the following sections by sample media.

2.3.1 Exterior Caulking

As part of the planning activities for the overall building renovation project, an inventory of exterior caulking was conducted as part of the building material classification survey. Eight types of visibly distinct exterior caulking were observed at glass to metal joints, metal to metal joints, metal to masonry joints, metal to granite joints, and masonry to granite joints on various sides of the building (see photos in Section 1 and below). At least one sample was collected from each type of caulking observed. A summary of the caulking materials by type and total estimated quantities is presented in the table below.

Table 2-2: Exterior Caulking Inventory/Summary

Caulking Type and Location	Estimated Quantity
PCBs \geq 50 ppm	
Caulking represented by samples UMSC-CBK-004 and UMSC-CBK-005 ; present at the vertical edges of granite panels joined to metal walls, and the metal to brick wall joint at the ends of these sections on the east and west façades.	9 east wall granite panels joined to metal wall x 12 l.f. each 9 west wall granite panels joined to metal wall x 12 l.f. each 4 south wall granite panel edges joined to metal wall x 8 l.f. each 2 east wall metal sections joined to brick wall x 15 l.f. each 2 east wall metal sections joined to brick wall x 15 l.f. each Total amount = 308 l.f.
Caulking type represented by sample UMSC-CBK-006 ; present at a metal to metal joint perimeter at east and west side windows over granite panels.	9 east wall windows x 32 l.f. each 9 west wall windows x 32 l.f. each Total amount = 576 l.f.
Caulking type represented by sample UMSC-CBK-010 ; present at a granite wall to metal frame joint at the exterior vertical joints of the South Center entry.	1 South Center entry door perimeter (3 sides) = 42 l.f. Total amount = 42 l.f.
Caulking type represented by sample UMSC-CBK-008 ; present at concrete block walls to metal frame joints at the vertical joints of the Southeast and Southwest entries.	2 Southeast entry door joints x 16 l.f. each 2 Southwest entry door joints x 16 l.f. each Total amount = 64 l.f.
PCBs > 1, < 50 ppm	
Caulking type represented by samples UMSC-CBK-003 and UMSC-CBK-012 ; present at the perimeter of metal window frames or air vent grills set into brick masonry on the northeast, northwest, and north end of the building.	3 west wall windows x 30 l.f. each 7 air vent grills x 6 l.f. each Total amount = 132 l.f.
Caulking type represented by sample UMSC-CBK-007 ; present at a metal door frame to brick masonry perimeter at west side entry door.	1 west wall door x 18 l.f. Total amount = 18 l.f.
PCBs < 1 ppm	
Caulking type represented by sample UMSC-CBK-009 ; present at the base of concrete columns at the joint with a granite curb on the south face of the building; at the east side entry door in brick masonry; and at granite joints beneath Southeast entry window/door unit.	6 columns x 5 l.f. each 1 east wall door x 18 l.f. 3 granite joints beneath Southeast entry x 1 l.f. each Total amount = 51 l.f.
Urethane glazing represented by sample UMSC-CBK-011 ; present at glass pane to metal frame joint of Southeast entry windows and doors.	Total amount = 826 l.f.
Total Exterior Caulking = 2,017 linear feet	

At joint types where samples were reported with PCBs < 1 ppm, no further assessment was conducted at those locations.

At joint types where samples were reported with PCBs > 1 and < 50 ppm, it was determined that the caulking present at these locations met the definition of an Excluded PCB Product as defined in 40 CFR 761.3, as both materials appeared to be original to the building construction (i.e., the material was very brittle and deteriorated, and there was no visual evidence of an older original caulking or newer replacement sealant at these joints).

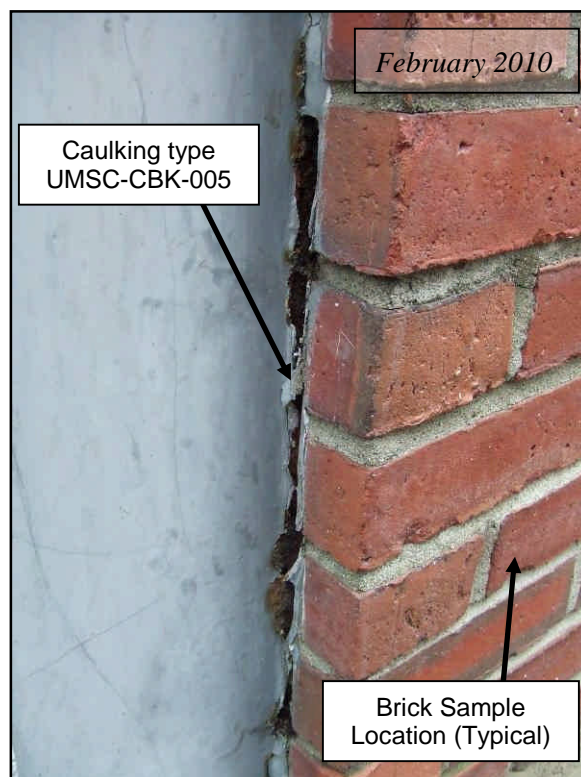
At joint types where caulking samples were reported to contain PCBs \geq 50 ppm, it was determined that each material sampled was most likely the original material installed at that location during the building construction. As such, the caulking would be classified as a PCB bulk product waste upon its removal from the building. To evaluate whether PCB had migrated from these caulking materials, the adjacent materials were assessed as described below.

2.3.2 Exterior Brick

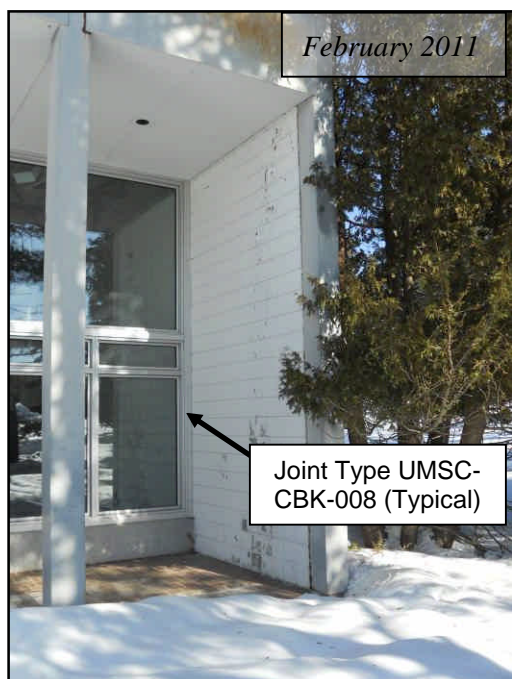
Four vertical caulking joints represented by caulking sample UMSC-CBK-005 are present between metal panels and brick walls as shown in the photo at the right. These joints, which are each approximately 15 feet in length, are present at each end of the metal / granite panel wall section on both the east and west faces of the building.

It was assumed that given the concentration of PCBs in the caulking (135,000 ppm), PCBs had also likely impacted the brick in direct contact with the joint. To characterize the potential PCB impacts to the bricks not in direct contact with the caulking, two samples were collected from the first full brick after the 90° corner from the caulked joint (i.e., the near edge of the second row of bricks). One sample was collected from the east wall, and one from the west wall.

Both samples were reported with PCBs below the unrestricted use cleanup level of 1 ppm (east wall sample at 0.355 ppm and west wall sample at 0.369 ppm). Because these results were reported below 1 ppm, the extent of PCBs in the brick walls adjacent to caulking type UMSC-CBK-005 has been delineated at a lateral distance of one brick width from the joint.



2.3.3 Exterior Concrete



Four vertical caulking joints represented by caulking sample UMSC-CBK-008 are present between concrete block walls and metal window / door frames on the south face of the building. These joints, which are each approximately 16 feet in length, are present at the east and west edges of both the Southeast and Southwest entry doors. A photo of this joint type is provided at left.

It was assumed that given the concentration of PCBs in the caulking (28,000 ppm), PCBs had also likely impacted the concrete block in direct contact with the joint. To characterize the potential PCB impacts to the concrete block not in direct contact with the caulking, samples were collected adjacent to caulking sample UMSC-CBK-008 on the west wall exterior to the Southwest entry doors. The sample at this location was collected at 6 inches from the joint and reported PCBs at 0.735 ppm. Because this result met the 1 ppm unrestricted use cleanup level, the extent of PCBs in concrete block walls adjacent to caulking type UMSC-CBK-008 was delineated at a lateral distance of 6 inches from the joint.

2.3.4 Exterior Granite

Two sets of surface wipe samples were collected from the granite blocks - one set per east and west building face. The surface wipe samples were collected in accordance with the standard wipe test as defined in 40 CFR 761.123 over the prescribed 100 cm² area using a hexane-soaked laboratory-prepared gauze pad. While four vertical granite to metal joints are also present on the south face of the building, the characterization sampling was performed at the east and west locations given the higher concentration of PCBs in caulking at these joints.

On each of the east and west faces of the building, the first surface wipe sample was collected from the granite face parallel to the building (not in direct contact with the caulking) to delineate the potential extent of PCBs on the surface. The edge of this surface is around a 90° corner from the caulked joint, and is located approximately 1.5 inches from the joint (i.e., the granite panel thickness is 1.5 inches). Both samples were both reported as non-detect for PCBs, as PCBs were not detected above the laboratory's minimum reporting limit of 0.5 micrograms per 100 square centimeters (ug/100cm²).

On each of the east and west faces of the building, the second surface wipe sample was collected from the granite in direct contact with the caulking. Because it was assumed that some level of PCBs would be detected on this surface given the caulking PCB concentration of 167,000 ppm, the direct contact surfaces were decontaminated prior to sample collection to determine whether granite decontamination could be a feasible remedial option. After removing a small section of caulking at each sample location, a small-scale decontamination pilot test was conducted by scrubbing the newly exposed granite surface with a wire brush and a heavy-duty citrus cleaner. The results of both samples collected from the decontaminated granite formerly in direct contact with caulking were reported at 0.9 ug/100 cm² for each of the east and west walls, which is below the EPA's 10 microgram per 100 cm² cleanup level for non-porous surfaces (e.g., polished granite).



2.4 ADJACENT GROUND SURFACES

Based on the results of the exterior caulking samples, which indicated that PCBs were present at concentrations up to 405,000 ppm, a preliminary round of sampling was performed to assess PCB concentrations in adjacent soils. A total of eight soil samples were collected from the perimeter of the building to determine whether PCBs had migrated from the caulking to adjacent soils.

Six samples were collected from "worst-case" locations at the base of caulked joints on the east and west sides of the building (three on each side) from 0 to 3 inches below ground surface. These results were reported with PCBs ranging from 9.9 to 44.0 ppm (average concentration of 20.9 ppm). The concentrations of PCBs in soil exceed the unrestricted use cleanup level of 1 ppm as well as the cleanup level established in the Maine Remedial Action Guidelines for soil in a residential setting (2.4 ppm).

Two samples were collected from the south side of the building at locations immediately adjacent to the foundation. These samples were not collected at the base of caulked joints, as no caulked joints on the southern face of the building terminate at an unpaved ground surface. Both of these samples were reported as non-detect for PCBs.

Prior to remediation, additional characterization sampling will be performed to determine the horizontal and vertical extent of soils containing PCBs > 1 ppm as described in Section 3.3.

2.5 CHARACTERIZATION SUMMARY

Results from an inventory and characterization sampling of interior and exterior building caulking indicated that approximately 260 linear feet of interior caulking and 1,000 linear feet of exterior building caulking contained PCBs at concentrations ≥ 50 ppm and would be classified as PCB bulk product waste upon removal (40 CFR 761.62). The caulking reported with PCBs ≥ 50 ppm (interior and exterior) was limited to the southern two-thirds of the building, where the exterior construction is primarily metal, granite, and concrete on a concrete foundation. The caulking reported with PCB > 1 and < 50 ppm was limited to the northern one-third of the building (two caulking types only – approximately 150 linear feet), where the exterior construction consists of brick masonry on a concrete foundation.

At the locations where caulking contained PCBs ≥ 50 ppm, sampling of adjacent materials indicated:

- Concrete building materials coated or in direct contact with the caulked joints were assumed to have been impacted by PCBs. Beyond the joint, PCB impacts to concrete block were limited to within 6 inches of the caulked joint (interior and exterior) except interior block in the southern entry ways, which extended to 24 inches of the caulked joint inside the building (6 vertical joints – caulking type UMSC-CBK-001);
- Bricks coated or in direct contact with the caulked joints were assumed to have been impacted by PCBs. Beyond the joint, PCB impacts to exterior brick is limited to the first full brick in direct contact with the caulked joint on the east and west walls of the building (4 vertical joints – caulking type UMSC-CBK-005);
- Polished granite panel surfaces coated or in direct contact with the caulking were assumed to have been impacted by PCBs. After decontamination, the surfaces were reported with PCB concentrations < 1 ug/100cm² at both sample locations, and the surfaces 1.5 inches away were reported as non-detect for PCBs (< 0.5 ug/100cm²) without any surficial decontamination;
- Surface soil samples on the east (3 locations) and west (3 locations) sides of the building were reported with PCBs above Federal and State cleanup levels; samples on the south side (2 locations) did not detect PCBs.

2.6 DATA USABILITY ASSESSMENT

A data quality assessment was conducted by Woodard & Curran to evaluate the usability of the site characterization data. Results for samples submitted to Analytics Environmental Laboratory were validated by a review of sample custody, holding times, surrogates, method blanks, field blanks, matrix spike/matrix spike duplicates, laboratory control samples, and laboratory and field duplicates. The assessment was performed in general conformance with USEPA Region I Guidelines and the Quality Control Guidelines.

Some samples were analyzed at dilutions due to the high concentration of PCBs present in the samples and/or due to sample matrix. Elevated quantitation limits are reported in these samples as a result of the dilutions performed.

One duplicate sample was collected and submitted to the laboratory as part of the field QA/QC procedures. The results of the duplicate sample (UMSC-CBSD-021; 21.0 ppm) in comparison to its associated primary sample

(UMSC-CBS-020; 23.9 ppm) indicated that the relative percent difference (12.9%) was within the limits allowed by data acceptance criteria, signifying acceptable data precision.

The relative percent difference between the column results for all detected PCBs met acceptance criteria ($\leq 25\%$) with the following exceptions: UMSC-CBK-001, UMSC-CBK-007, UMSC-CBK-012, UMSC-CBS-015, and UMSC-CWG-032. These results were qualified as estimated (J).

Accuracy of the analytical data was assessed by reviewing recoveries for surrogates, laboratory control samples (LCS), and laboratory control sample duplicates (LCSD). All surrogate recoveries met acceptance criteria or were diluted out. The LCS and LCSD met acceptance criteria. No qualifications were applied to the data.

Representativeness of the data was evaluated utilizing site use information and sampling data. All samples were extracted and analyzed within allowable holding times. Consistent procedures and laboratory analysis of the data were achieved. Sample containers were packed on ice and were accompanied by complete chain of custody forms from the time of sample collection until laboratory delivery. PCBs were not detected in the laboratory method blank analysis, indicating that there were no interferences introduced at the laboratory during sample analysis.

The data packages were reviewed to ensure that all sample and associated quality assurance results were available. The completeness review indicated that all samples were analyzed and all quality control results were available to complete the data validation process.

Based on a review of the existing site data, the data adequately represents the materials tested, and the samples collected to date are considered usable for the purposes of characterizing PCB-affected media in accordance with 40 CFR Part 761.

Table 2-3
Caulking and Adjacent Material Characterization Data
Stewart Commons - University of Maine - Orono, Maine

General Location	Sample Description	Sample ID	Date	Detection Limit	Total PCBs
Exterior Building Materials					
Caulking					
Concrete to granite joint at base of columns in front of south face entries; also used at granite joints beneath south face east end entry doors; also around the east side entry door at top of stairs.	A flexible white repair caulking used where no visible caulking was present beneath; sampled from western column in front of southwest lobby	UMSC-CBK-009	02/25/10	0.330	ND
Caulking on metal within window panes (glass to metal joint) on south face windows, east lobby entryway	A very flexible and elastic intact gray urethane caulking; sampled from the left vertical joint on the easternmost window of the lobby	UMSC-CBK-011	02/25/10	0.300	0.630
Brick to metal window frame perimeter joint (3 windows each on east and west walls); vent perimeters (1 east wall vent; 6 north wall vents).	A very brittle non-elastic white caulk, removable by breaking off fragments. Sampled from a west window (-003) and a eastern vent (-012).	UMSC-CBK-003	02/25/10	2.74	34.8
		UMSC-CBK-012	02/25/10	0.59	13.0 J
Metal to brick joint at perimeter of west side entry door at top of stairs	A very brittle and stiff white caulking protruding from beneath the door frame at only some portions of the frame; sampled from left vertical joint of door frame	UMSC-CBK-007	02/25/10	0.260	3.41 J
Metal to metal joint at perimeter of windows above each granite block on east and west walls	A thin bead of silver colored flexible and highly elastic caulking sampled from the sixth window on the west wall	UMSC-CBK-006	02/25/10	26,334	405,000
Metal frame to granite joint at south face central lobby entry; perimeter of window bank.	A thin bead of a flexible gray intact caulking sampled from the right side of the central lobby on the south face	UMSC-CBK-010	02/25/10	158	2,600
Granite block to metal wall joint (9 granite block panels on each of east and west walls, 2 granite block panels on south wall);	A deteriorating light gray caulking protruding from the joint at some locations; brittle and attached to rust and/or paint on the outside, softer and flexible on the inside. Sample collected from center granite panel on western wall (-004) and from the brick to metal joint at the southern end of the western wall.	UMSC-CBK-004	02/25/10	15,774	167,000
Metal wall to brick wall joint (2 joints each on east and west walls).		UMSC-CBK-005	02/25/10	16,929	135,000
Metal to concrete block joint at the corners of the south face window banks at the east and west lobbies	A flexible gray caulking joint running from ground to ceiling; sampled from southwest corner joint	UMSC-CBK-008	02/25/10	2,831	28,000
Concrete					
Concrete wall to metal window frame joint at the west edge of the window bank of the west entryway on the south face of the building.	Concrete sample taken 6" from vertical joint, at the same location as sample -008.	UMSC-CBC-027	11/04/10	0.033	0.735
Bricks					
West side of the building, at metal wall to brick wall joint.	Brick sample taken at second brick from caulked joint, with the first brick being a half-brick length, same location as sample -005	UMSC-CBB-028	11/04/10	0.036	0.369
East side of the building, at metal wall to brick wall joint.	Brick sample taken at second brick from caulked joint, with the first brick being a half-brick length, same location as sample -020	UMSC-CBB-029	11/04/10	0.033	0.355
Granite					
West side of the building, granite block to metal wall joint	Decontamination pilot test location, caulking removed, scrubbed with wire brush and citrus-based solvent. Rinsed with DI water. Sample is on granite face perpendicular to building wall, at same location as sample -004	UMSC-CWG-030	11/04/10	0.5	0.9
West side of the building, granite block to metal wall joint	Decontamination pilot test location. Rinsed with DI water. Sample is on granite face parallel to building wall, at same location as sample -004	UMSC-CWG-031	11/04/10	0.5	ND
East side of the building, granite block to metal wall joint	Decontamination pilot test location, caulking removed, scrubbed with wire brush and citrus-based solvent. Rinsed with DI water. Sample is on granite face perpendicular to building wall, at same location as sample -019	UMSC-CWG-032	11/04/10	0.5	0.9 J
East side of the building, granite block to metal wall joint	Decontamination pilot test location. Rinsed with DI water. Sample is on granite face parallel to building wall, at same location as sample -019	UMSC-CWG-033	11/04/10	0.5	ND

Table 2-3
Caulking and Adjacent Material Characterization Data
Stewart Commons - University of Maine - Orono, Maine

General Location	Sample Description	Sample ID	Date	Detection Limit	Total PCBs
Perimeter Soils					
West side of the building, between second and third granite panels moving from north to south	Soil sample at building base, 0-3" deep, encompassing both vertical joints	UMSC-CBS-013	11/04/10	0.790	9.98
West side of the building, between fifth and sixth granite panels moving from north to south	Soil sample at building base, 0-3" deep, encompassing both vertical joints	UMSC-CBS-014	11/04/10	0.790	9.89
West side of the building, between the southern-most granite panel and brick portion	Soil sample at building base, 0-3" deep, encompassing both vertical joints	UMSC-CBS-015	11/04/10	2.05	25.2 J
South side of the building, four feet west from the west corner of the central entrance, behind the bushes	Soil sample at building base, 0-3" deep	UMSC-CBS-016	11/04/10	0.040	ND
South side of the building, eight feet east from the east corner of the central entrance, behind the bushes	Soil sample at building base, 0-3" deep	UMSC-CBS-017	11/04/10	0.033	ND
East side of the building, between the southern-most granite panel and brick portion	Soil sample at building base, 0-3" deep, encompassing both vertical joints	UMSC-CBS-018	11/04/10	0.860	12.5
East side of the building, between fifth and sixth granite panels moving from north to south	Soil sample at building base, 0-3" deep, encompassing both vertical joints	UMSC-CBS-019	11/04/10	1.91	44.0
East side of the building, between the northern-most granite panel and brick portion	Soil sample at building base, 0-3" deep, encompassing both vertical joints	UMSC-CBS-020	11/04/10	1.98	23.9
Interior Building Materials					
Caulking					
Concrete wall to metal window frame joints at edges of the window banks of the three main entryways on the south face of the building.	A deteriorating translucent-colored flexible caulking at southwest corner of building; sample collected from edge of southwest entry door.	UMSC-CBK-001	02/25/10	308	7,680 J
Concrete wall to metal window frame joints at edges of the window banks of the three main entryways on the south face of the building.	An intact gray slightly flexible caulking within the breezeway at the central entryway of the south face; sample collected from western edge of inner set of doors.	UMSC-CBK-002	02/25/10	16.4	171
Concrete					
Concrete wall to metal window frame joint at the west edge of the window bank of the west entryway on the south face of the building.	Concrete sample taken 6" from vertical joint, at the same location as sample -001.	UMSC-CBC-022	11/04/10	0.330	3.25
Concrete wall to metal window frame joint at the west edge of the window bank of the west entryway on the south face of the building.	Concrete sample taken 12" from vertical joint, at the same location as sample -001.	UMSC-CBC-023	11/04/10	0.170	2.19
Concrete wall to metal window frame joint at the west edge of the window bank of the west entryway on the south face of the building.	Concrete sample taken 24" from vertical joint, at the same location as sample -001.	UMSC-CBC-034	02/09/11	0.033	0.784
Concrete wall to metal window frame joint at the east edge of the window bank of the west entryway on the south face of the building.	Concrete sample taken 24" from vertical joint.	UMSC-CBC-036	02/09/11	0.033	0.277
Concrete wall to metal window frame joint at the west edge of the window bank of the east entryway on the south face of the building.	Concrete sample taken 24" from vertical joint.	UMSC-CBC-038	02/09/11	0.033	0.525
Concrete wall to metal window frame joint at the east edge of the window bank of the east entryway on the south face of the building.	Concrete sample taken 24" from vertical joint.	UMSC-CBC-040	02/09/11	0.033	0.289
Concrete wall to metal window frame joint at the west edge of the door frame assembly of the inner central entryway on the south face of the building.	Concrete sample taken 6" from vertical joint, at the same location as sample -002.	UMSC-CBC-025	11/04/10	0.033	0.391

Notes:

1. Samples were extracted by USEPA Method 3540C (Soxhlet) and analyzed by USEPA Method 8082.
2. Bulk sample results are presented in milligrams per kilogram (mg/kg); wipe sample results are presented in micrograms per 100 cm² (ug/100cm²).
3. PCB results were reported as Aroclor 1254 with the exception of samples -030 and -032, which were reported as Aroclor 1260.
4. ND = Not detected above laboratory's minimum reporting limit, as indicated.
5. J = Result is qualified as estimated based on data validation.

3. REMEDIATION PLAN

The remediation plan proposed herein has been prepared to meet the requirements of 40 CFR 761.61(a). Interior and exterior caulking containing PCBs ≥ 50 ppm will be removed for off-site disposal in accordance with 40 CFR 761.62, and adjacent building materials containing PCBs > 1 ppm will be removed for off-site disposal in accordance with 40 CFR 761.61(a). Materials will be segregated for disposal based on the classification of the materials as PCBs ≥ 50 ppm, PCBs > 1 and < 50 ppm, or general demolition debris.

This section includes details of the site preparations and controls, proposed remediation activities for each media, verification sampling plans, waste storage and disposal plans, and recordkeeping requirements.

3.1 SITE PREPARATION AND CONTROLS

Prior to initiating remedial activities, the following site controls will be implemented:

- A Health & Safety Plan will be developed specific to the work activities. Workers will follow applicable Federal and State regulations regarding the work activities, including but not limited to OSHA regulations, fall protection standards, respiratory protection, ladder/scaffolding safety, personal protective equipment, etc.;
- Additional notifications and plans required for the work activities will be prepared and submitted for approval, as needed (EPA Approval notices and submittals, certifications, etc.);
- Access to the active work areas will be controlled in a manner determined by the contractor to meet project requirements and access needs;
- Access to the removal areas will be by appropriate staging, scaffolding, and/or mechanical lifts. Caulking, brick, and concrete removal areas will be contained using polyethylene sheeting or equivalent to control any blowing dust or debris generated from the removal activities. Wet wiping and water misting will be used as a dust suppressant as appropriate;
- Ground cover (water impervious membrane or equivalent) will be placed along the building walls to contain any debris or building materials removed during the work;
- Powered tools will be equipped with appropriate tool guards and dust/debris collection systems (i.e., HEPA filters). Wet wiping and vacuuming of tools and equipment in the work area will be performed at the completion of the work activity;
- To reduce dust levels and exposures to dust, a combination of engineered controls (e.g., work zone enclosures), equipment equipped with HEPA filters and dust controls, and personal protective equipment (PPE – respirators) will be implemented as part of the work activities;
- At the end of each work day any debris or materials collected on the ground cover sheeting will be placed in the appropriate waste containers;
- Following completion of the removal activities and verification that the cleanup levels have been met, site controls specific to the PCB remediation component of work will be dismantled. Containment materials will be transported off-site for proper disposal as per Section 3.4.

3.2 REMEDY IMPLEMENTATION – BUILDING MATERIALS

The following sections present the remediation plan proposed for the clean-up and disposal of each of the identified PCB-containing building media at Stewart Commons. The remainder of this plan is no longer separated by interior and exterior materials, but instead is organized by construction type, as each renovation area described herein will involve the removal of all building components. Each section describes the caulking present, the adjacent materials, and how each waste stream will be managed relative to its PCB concentrations.

3.2.1 Entrance Ways - South Face

The south face of the building is constructed with four window / door assemblies: the Southeast and Southwest assemblies each measure approximately 16 feet tall by 35 feet wide, and the two South Center assemblies (inner and outer doors) each measure approximately 8.5 feet tall by 25 feet wide. At each door assembly, caulked joints were observed at the vertical joints between the metal frames and the concrete block walls. At the South Center door assembly, an upper horizontal caulked joint was observed between the metal frame and the overhanging ceiling panel; while similar upper horizontal caulked joints could not be visually confirmed at the Southeast and Southwest entries given their height and access limitations, it has been assumed for the purposes of this Plan that a similar caulked joint is present at those locations. Finally, each door assembly with an exterior side (i.e., not the inner doors of the South Center breezeway) is adjacent to some amount of polished granite as described below.

3.2.1.1 South Face Metal Window and Door Frames

At each joint, the metal frames in direct contact with interior and exterior caulking will be removed and disposed of with the caulking as ≥ 50 ppm PCB waste. Frames coated or in direct contact with the caulked joint will be removed through mechanical means (saw cutting or equivalent) and segregated from the remaining frames not in direct contact with caulking.

Given that no glazing sealant was observed on the majority of the windows and where present a sample did not contain PCBs > 1 ppm, the window glass and frames not in direct contact with the caulking will be disposed of as non-PCB wastes. Prior to disposal, wipe samples will be collected in accordance with 40 CFR 761.123 from these frames at a frequency of 1 sample per 100 l.f. of frame (i.e., two samples per the Southeast and Southwest assemblies [approximately 215 l.f. of non-direct contact frame each], and one sample per South Center assembly [approximately 75 l.f. of non-direct contact frame each]). Samples will be transported to the laboratory under standard chain of custody procedures, extracted by USEPA Method 3540C (Soxhlet extraction), and analyzed for PCBs by USEPA Method 8082. Analytical results from the verification samples will be evaluated to determine whether or not this task is complete as follows:

- Analytical results $\leq 10 \mu\text{g}/100 \text{ cm}^2$ – task complete; no additional clean up required and/or no disposal restrictions will apply to the remainder of the frames.
- Analytical results $> 10 \mu\text{g}/100 \text{ cm}^2$ – remainder of the frames will either be decontaminated to meet the above standard or disposed of off-site as PCB remediation waste.

PCB wastes will be stored for disposal as described in Section 3.4. It is assumed that the components not in direct contact with the caulking will meet the cleanup standard; therefore, approximately 2.4 cubic yards (CY) of material will be removed for off-site disposal as PCB waste.

3.2.1.2 South Face Concrete Block Walls

Concrete block walls coated or in direct contact with vertical caulked joints at the south face entries will be removed for disposal as PCB waste ≥ 50 ppm, along with the caulking and adjacent metal frames. As supported by the characterization data presented in Section 2, concrete blocks will be sawcut and segregated for disposal as follows:

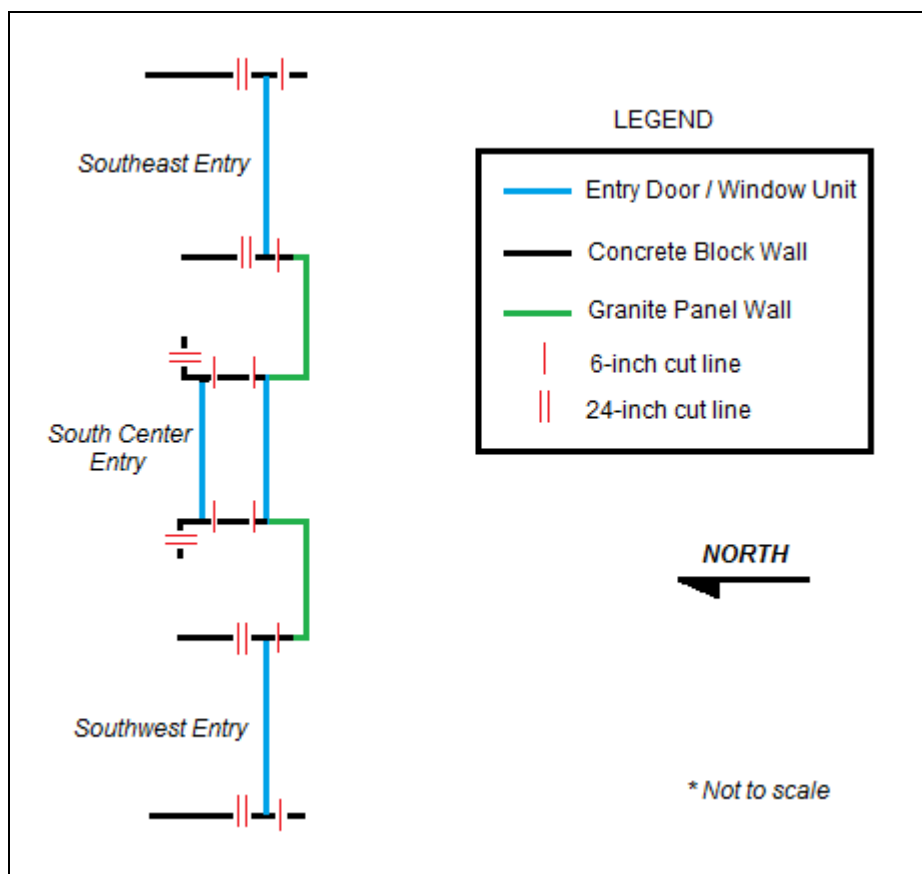
- Concrete block walls to be managed as PCB waste ≥ 50 ppm includes:
 - Interior concrete block walls within 24 inches of the interior caulked joints at the Southeast entry, Southwest entry, and inside the inner doors of the South Center entry;
 - Interior concrete block walls within 6 inches of the vertical caulked joints within the South Center breezeway (i.e., outside of the inner doors and inside of the outer doors); and,
 - Exterior concrete block walls within 6 inches of the exterior caulked joints at the Southeast and Southwest entries.
- Interior concrete block walls > 24 inches from the interior caulked joints will be managed as non-PCB demolition debris (walls adjacent to either side of the Southeast entry, the Southwest entry, and the inner doors of the South Center entry);
- Exterior concrete block walls > 6 inches from the exterior caulked joints at the Southeast and Southwest entries will be managed as non-PCB demolition debris, as well as the concrete blocks between the two sawcuts within the South Center entry.

An illustration of the south face entry layout and proposed cut lines is provided on the following page.

During block segregation, blocks along cut lines may be disposed of in their entirety if sawcutting would segregate only a small volume from the block, thereby reducing a time-intensive labor expense and adding only a small amount to the total disposal volume.

PCB waste materials will be stored for disposal as described in Section 3.4. It is assumed that approximately 7.5 CY of concrete block will be generated for off-site disposal as PCB wastes. No additional sampling is proposed beyond the cut-lines given the frequency of sample collection as part of the planning (interior joints – 1 sample per 16 linear feet of caulking and exterior joints – 1 sample per 64 linear feet of caulking).

Figure 3-1: South Face Concrete Block Wall Cut Lines



3.2.1.3 South Face Ceiling Panels

On the underside of each ceiling overhang above the three south face entry doors, the portions of plaster panels coated or in direct contact with the top horizontal caulked joints will be removed for disposal as PCB waste ≥ 50 ppm, along with the caulking and adjacent metal frames (see photo below for the ceiling overhang configuration). As supported by the characterization data presented in Section 2 for the concrete block walls adjacent to the same caulking at vertical joints, the ceiling panels will be removed following an approach similar to the cut line and disposal approach proposed for the concrete block walls as described in the previous section. The portion of the plaster ceiling panels in direct contact with the joint to a distance of 6 inches will be removed with the caulking as PCB waste ≥ 50 ppm. Portions of the panels at distances > 6 inches from the upper horizontal caulked joints will be managed as non-PCB demolition debris. The PCB wastes will be managed for disposal as described in Section 3.4.

To verify the PCB waste segregation distances, concrete plaster samples will be collected at a frequency of 1 sample per entrance way, which is 1 sample per 25 or 35 l.f. of caulking (3 samples in total). If the sample results are ≤ 1 ppm, then no changes to the above described methods will be implemented. If the results are > 1 ppm, then additional concrete will be removed and off-set verification samples collected at the same frequency.



3.2.1.4 South Face Granite

Granite Panel Sections

As shown in the photo below and on Figure 3-1, two sections of granite panels are present on the south face of the building. One section is located between the South Center and the Southwest entry, and the other section is located between the South Center and the Southeast entry. Each section consists of ten granite panels constructed in a U-shape measuring approximately 7 feet high by 44 feet long (approximate thickness of 3 inches). The granite to granite joints between each panel consist of mortar. The vertical end joints at the edges of both 44-foot sections consist of caulking represented by sample UMSC-CBK-010 (2,600 ppm). These joints terminate on either metal door frames or metal columns. Given the significant volume of these panels, the caulking in direct contact with the granite (vertical granite to metal joints) will be removed by physical means to the maximum extent practical. The caulking (approximately 28 l.f.) will be managed for disposal as ≥ 50 ppm PCB wastes.

After caulking removal, the granite and metal columns (two locations) will be decontaminated using a heavy duty cleaner (e.g., a citrus cleaner as was used in the characterization pilot test). The metal door frames at the other two joints will be removed for disposal as described in the previous section. The decontamination areas will include the granite and metal column surface formerly coated or in direct contact with the caulking as well and the entire granite surface perpendicular to the existing building face (i.e., the panel thickness) along each vertical edge of the granite panels at the end of the section.

Verification wipe samples will be collected in accordance with 40 CFR 761.123 from the edges of the granite panels at a frequency of one sample per section of granite (or 2 samples per the 28 l.f. of caulking). One additional wipe sample will be collected from each of the decontaminated metal columns (2 samples). Samples will be transported to the laboratory under standard chain of custody procedures, extracted by USEPA Method 3540C (Soxhlet extraction),

and analyzed for PCBs by USEPA Method 8082. Analytical results from the verification samples will be evaluated to determine whether or not this task is complete as follows:

- Analytical results $\leq 10 \mu\text{g}/100\text{cm}^2$ – task complete; no additional clean up required and no disposal restrictions will apply to the granite panels.
- Analytical results $> 10 \mu\text{g}/100\text{cm}^2$ – additional decontamination will be performed. If results below the cleanup level cannot be achieved, the granite will be disposed of as PCB remediation waste.



Decontamination fluids will be collected and managed for disposal as described in Section 3.4.

Southeast and Southwest Granite Curbs

At the Southeast and Southwest entries, a 16-inch tall granite curb is located beneath the window bank composing the entryway. The curb is present beneath the windows, but not the single door at each of these lobbies (see photo in Section 3.2.1.3). No caulking was observed at the horizontal joint between the metal window frame and the granite curb, nor was any caulking observed at the short vertical joint adjacent to the door frame. However, one caulked joint was present at the short vertical joint adjacent to the outer wall of each lobby area (the west end of the western lobby, and the east end of the eastern lobby as shown in the photo below). This caulking is a continuation of the joint represented by sample UMSC-CBK-008 (28,000 ppm). This caulking will be removed for disposal



with the window frames as described in Section 3.2.2.1. The granite curb ends will be decontaminated as described previously in this section for the granite panel edges, and one verification sample will be collected for comparison to the cleanup criteria as described above.

3.2.2 Wall Sections – East and West Faces

The southern portions of the east and west faces of the building are constructed with nine pairs of granite panels, each pair measuring a total of approximately 6 feet tall by 7.5 feet wide. Metal panels 10 inches wide abut either side of each granite panel, forming a vertical caulked joint between the granite and the metal. At either end of the granite panel section, brick wall meets metal panel, forming a vertical caulked joint. Each granite panel is below a window structure measuring approximately 9 feet tall by 7 feet wide. Caulking is present at the vertical and horizontal joints between the glass and metal window frames.



3.2.2.1 Metal and Granite Wall Caulking

There are three types of caulking associated with this wall construction:

- Granite to metal vertical joints (UMSC-CBK-004);
- Metal to brick vertical joints (UMSC-CBK-005); and,
- Metal to metal perimeter joints (UMSC-CBK-006).

Each of these materials will be removed for disposal ≥ 50 ppm PCB wastes in conjunction with certain adjacent material remediation as described in the following sections.

3.2.2.2 Granite Panels

There are nine panels on the east and west sides of the building, each with an approximate volume of 6 cubic feet. Given the significant volume of these panels, the caulking in direct contact with the granite (vertical joints with metal) will be removed by physical means to the maximum extent practical. The caulking (approximately 216 linear feet) will be managed for disposal ≥ 50 ppm PCB wastes.

After caulking removal, the granite will be decontaminated using a heavy duty cleaner (e.g., a citrus cleaner as was used in the characterization pilot test). This will include the surface formerly coated or in direct contact with the caulking as well as the entire surface perpendicular to the existing building face (i.e., the 1.5-inch thick panel edge) along both vertical edges of the granite panels.

Verification wipe samples will be collected in accordance with 40 CFR 761.123 from the edges of the granite panels at a frequency of 1 sample per 25 l.f. of caulking. Samples will be transported to the laboratory under standard chain of custody procedures, extracted by USEPA Method 3540C (Soxhlet extraction), and analyzed for PCBs by USEPA

Method 8082. Analytical results from the verification samples will be evaluated to determine whether or not this task is complete as follows:

- Analytical results $\leq 10 \mu\text{g}/100\text{cm}^2$ – task complete; no additional clean up required and no disposal restrictions will apply to the granite panels.
- Analytical results $> 10 \mu\text{g}/100\text{cm}^2$ – additional decontamination will be performed. If results below the cleanup level cannot be achieved, the granite will be disposed of as PCB remediation waste.

Decontamination fluids will be collected and managed for disposal as described in Section 3.4.

3.2.2.3 Windows and Metal Panels

Windows are present above each granite panel on the east and west walls of the building. Each window and granite panel section is separated by an 18-foot tall vertical metal panel. Because caulking is in direct contact with the windows and each metal panel and in consideration of the effort involved with decontamination followed by verification sampling, the entire window and frame and all 20 metal panels will be removed as PCB waste ≥ 50 ppm. The approximate disposal volume is estimated at 3.35 CY. The waste stream will be managed for disposal as described in Section 3.4. Given that all these components will be removed and disposed as ≥ 50 ppm PCB wastes, no verification samples are proposed (given that there are no materials to sample).

3.2.2.4 Brick End Walls

The north and south metal panel bordering the granite panel section on the east and west faces of the building are abutted by a brick wall. A vertical caulked joint running from the concrete foundation to the roof forms the interface between the brick and metal panel. Characterization sampling of the first brick not in contact with the caulked joint reported PCBs at < 1 ppm. Therefore, the first column of bricks coated or in direct contact with the caulked joint will be removed for disposal with the caulking as PCB waste ≥ 50 ppm. The brick wall building exterior appears to be only half the thickness of a structural brick. The approximate total volume of all four brick abutments to be removed as PCB waste ≥ 50 ppm is estimated at 0.27 CY. No additional sampling is proposed beyond the cut-lines given the frequency of sample collection as part of the planning (2 of the 4 areas sampled and both samples were < 1 ppm).

3.2.3 PCB Caulking > 1 and < 50 ppm

The caulking reported with PCB > 1 and < 50 ppm is limited to the northern portion of the building where the exterior construction consists of brick masonry on a concrete foundation. The two types of caulking observed in this area (represented by samples UMSC-CBK-003, UMSC-CBK-007, and UMSC-CBK-012) total approximately 150 linear feet of caulking around windows and vent covers set into the brick masonry.

Because these materials appear to be original to the building construction and contain PCBs < 50 ppm, they meet the definition of Excluded PCB Products. However, the caulking will be managed for disposal at its as-found concentrations upon removal from the building. Due to the presence of PCBs in the material, the removal of the caulking at these locations will be performed to the maximum extent practical using the site controls established in Section 3.1, and will be managed for disposal as PCB waste > 1 and < 50 ppm as described in Section 3.4.

3.3 SOIL REMEDIATION

Initial soil characterization data indicates that PCBs are present in soils along the east and west faces of the building at concentrations above the unrestricted use cleanup level of 1 ppm. Based on the existing data set from soils sampled at worst-case locations, it does not appear that any soils that would be classified as hazardous waste (PCBs > 50 ppm) are present at the site; however, this will be confirmed during subsequent characterization sampling.

To determine the extent of soil removal required, additional horizontal and vertical delineation of PCBs in soils will be conducted prior to excavation. The proposed characterization sampling is limited to certain soils adjacent to the east and west faces of the building as no PCB source material caulking (i.e., PCBs > 50 ppm) was identified on the northern portion of the building, and to the south, no PCBs were detected in the soil characterization samples collected from the limited unpaved areas (landscaping beds) adjacent to the south face of the building. This characterization sampling work will be performed with a goal of developing a soil remediation plan to be submitted to EPA as an addendum or modification to this Remediation Plan.

Given the size of the area where PCB impacts to soils are likely, additional characterization samples will be collected along portions of the east and west faces of the building. The portions of these façades are limited to the areas constructed with granite panels, metal panels, and windows with PCB-containing caulking. On both the east and west façades, these sections cover an approximate length of 75 feet of the building. The following characterization sampling plan is proposed:

- A row of surface samples (0-3 inches bgs) will be collected parallel to the building at 10 foot spacings and at a distance of 10 feet from the foundation (8 samples on each east and west sides); these samples will support the east-west delineation of the removal area.
- Surface samples will be collected near the building foundation at a distance of 10 feet beyond the end of the building sections constructed with PCB-containing caulking (1 sample at each end x 2 building sides = 4 samples); these samples will support the north-south delineation of the removal area.
- Subsurface soil samples will be collected at depth to delineate the vertical extent of PCB impacts both adjacent to the building foundation (4 samples on each east and west sides) as well as at a distance of 10 feet from the building (4 samples on each east and west sides).

The proposed sequence of work activities is to complete the building material remediation and partial demolition prior to any soil remediation.

3.4 STORAGE AND DISPOSAL

The following activities will be completed with regard to the proper storage and disposal of PCB wastes:

- Secure, lined, and covered waste containers (roll-off or equivalent) or 55-gallon DOT-approved steel containers will be staged for the collection of PCB wastes generated during the work activities in accordance with 40 CFR 761.65;
- PCB waste containers will be properly labeled and marked in accordance with 40 CFR 761.40;
- At the end of each work day, any generated PCB wastes will be removed from the work area and placed into the appropriate waste containers;

- Caulking and certain building materials in direct contact with caulking (concrete, bricks, metal panels, and window or door frames) will be transported off-site for disposal as ≥ 50 ppm PCB wastes. The waste will be transported to a hazardous waste landfill permitted to accept this type of waste (e.g., Chemical Waste Management's landfill in Model City, NY, or equivalent facility). If any site soils are found to contain PCBs ≥ 50 ppm, these soils will also be transported to the same waste landfill as the building materials containing PCBs ≥ 50 ppm.
- Caulking, certain building materials, or soils containing PCBs > 1 and < 50 ppm will be transported off-site for disposal as PCB remediation waste in accordance with 40 CFR 761.61(a). The waste will be transported to a non-hazardous waste landfill permitted to accept such materials (e.g., Waste Management's Crossroads Landfill in Norridgewock, Maine or equivalent facility).
- At the end of their use on the project, non-disposable tools and equipment will be decontaminated in accordance with 40 CFR 761.79. Decontamination fluids generated during the work will be collected/contained and managed/disposed in accordance with 40 CFR 761.79.
- Copies of waste manifests, waste shipment records, and certificates of disposal will be collected and provided as part of the final report to EPA and MEDEP.

3.5 RECORDKEEPING AND DOCUMENTATION

Following completion of the work activities, records and documents per 40 CFR Part 761 will be generated and maintained at one location. These documents will be made available to EPA and MEDEP upon request. A final report documenting the completion of the work activities and including but not limited to a description of the work activities, verification analytical results, volumes of disposed materials, and waste disposal documentation will be prepared and submitted to EPA and MEDEP.

3.6 SCHEDULE

Remediation activities will be conducted following approval of this plan and in accordance with the overall building renovation project schedule. Although the building is currently unoccupied, the work schedule will depend on the time of year and the University's academic calendar. At this time, it is anticipated that the partial demolition of portions of the building that will be managed as PCB waste will begin in the late spring of 2011.

APPENDIX A: LABORATORY ANALYTICAL DATA



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800-929-9906
www.analyticslab.com

March 18, 2010

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

**RE: Analytical Results Case Narrative
Analytics # 65950
University of Maine-Stewart Commons Proj.# 222822**

Dear Ms. Wallace;

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

- Case Narrative/Non-Conformance Summary
- Sample Log Sheet - Cover Page
- PCB Form 1 Data Sheet for Samples and Blanks
- Chromatograms
- PCB Form 10 Confirmation Results
- PCB Form 3 MS/MSD (LCS) Recoveries
- Chain of Custody (COC) Forms

QC NON-CONFORMANCE SUMMARY

Sample Receipt:

No exceptions.

PCBs by EPA Method 8082:

All samples required dilution due to high concentrations of PCBs in the samples or matrix affect.

Sample 65950-9, RX had interferences that prevented the evaluation of surrogate Decachlorobiphenyl (DCB). Surrogate Tetrachloro-m-xylene was in control. Results were reported with a comment to this affect.

PCB 1016 had a high recovery in the laboratory control sample (L030210PSOX, RR,A/C) on column #2. The laboratory control sample duplicate (LD03210PSOX, RR,A/C) was in control for all analytes on both columns. Results were reported without qualification.

If you have any questions on these results, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC



Stephen L. Knollmeyer
Laboratory Director

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

Report Number: 65950

Revision: Rev. 0

Re: UMaine- Stewart Commons

222822

Enclosed are the results of the analyses on your sample(s). Samples were received on 26 February 2010 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

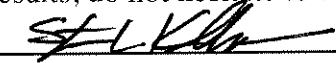
<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
65950-1	02/25/10	UMSC-CBK-001	EPA 8082 (PCBs only)	
65950-2	02/25/10	UMSC-CBK-002	EPA 8082 (PCBs only)	
65950-3	02/25/10	UMSC-CBK-003	EPA 8082 (PCBs only)	
65950-4	02/25/10	UMSC-CBK-004	EPA 8082 (PCBs only)	
65950-5	02/25/10	UMSC-CBK-005	EPA 8082 (PCBs only)	
65950-6	02/25/10	UMSC-CBK-006	EPA 8082 (PCBs only)	
65950-7	02/25/10	UMSC-CBK-007	EPA 8082 (PCBs only)	
65950-8	02/25/10	UMSC-CBK-008	EPA 8082 (PCBs only)	
65950-9	02/25/10	UMSC-CBK-009	EPA 8082 (PCBs only)	
65950-10	02/25/10	UMSC-CBK-010	EPA 8082 (PCBs only)	
65950-11	02/25/10	UMSC-CBK-011	EPA 8082 (PCBs only)	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Virginia, Maryland, and is validated by the U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature


Stephen L. Knollmeyer Lab. Director

Date

3/18/2010

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consent of Analytics Environmental Laboratory, LLC.**

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

Report Number: 65950

Revision: Rev. 0

Re: UMaine- Stewart Commons

222822

Enclosed are the results of the analyses on your sample(s). Samples were received on 26 February 2010 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
65950-12	02/25/10	UMSC-CBK-012	EPA 8082 (PCBs only)	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Virginia, Maryland, and is validated by the U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature 
Stephen L. Knollmeyer Lab. Director

Date 3/18/2010

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Surrogate Compound Limits

	Matrix: Units:	Aqueous % Recovery	Solid % Recovery	Method
Volatile Organic Compounds - Drinking Water				
1,4-Difluorobenzene		70-130		EPA 524.2
Bromofluorobenzene		70-130		
1,2-Dichlorobenzene-d4		70-130		
Volatile Organic Compounds				
1,2-Dichloroethane-d4		70-120	70-120	EPA 624/8260B
Toluene-d8		85-120	85-120	
Bromofluorobenzene		75-120	75-120	
Semi-Volatile Organic Compounds				
2-Fluorophenol		20-110	35-105	EPA 625/8270C
d5-Phenol		15-110	40-100	
d5-nitrobenzene		40-110	35-100	
2-Fluorobiphenyl		50-110	45-105	
2,4,6-Tribromophenol		40-110	40-125	
d14-p-terphenyl		50-130	30-125	
PAH's by SIM				
d5-nitrobenzene		21-110	35-110	EPA 8270C
2-Fluorobiphenyl		36-121	45-105	
d14-p-terphenyl		33-141	30-125	
Pesticides and PCBs				
2,4,5,6-Tetrachloro-m-xylene (TCX)		46-122	40-130	EPA 608/8082
Decachlorobiphenyl (DCB)		40-135	40-130	
Herbicides				
Dichloroacetic acid (DCAA0		30-150	30-150	
Gasoline Range Organics/TPH Gasoline				
Trifluorotoluene TFT (FID)		60-140	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)		60-140	60-140	
Trifluorotoluene TFT (PID)		60-140	60-140	
Bromofluorobenzene (BFB) (PID)		60-140	60-140	
Diesel Range Organics/TPH Diesel				
m-terphenyl		60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH

PCB DATA SUMMARIES

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

March 16, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: Lab QC

Lab Sample ID: B020810PAS RR2
Matrix: Soil
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date:
Lab Receipt Date:
Extraction Date: 02/08/10
Analysis Date: 03/05/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	U
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	87	%
Decachlorobiphenyl	69	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

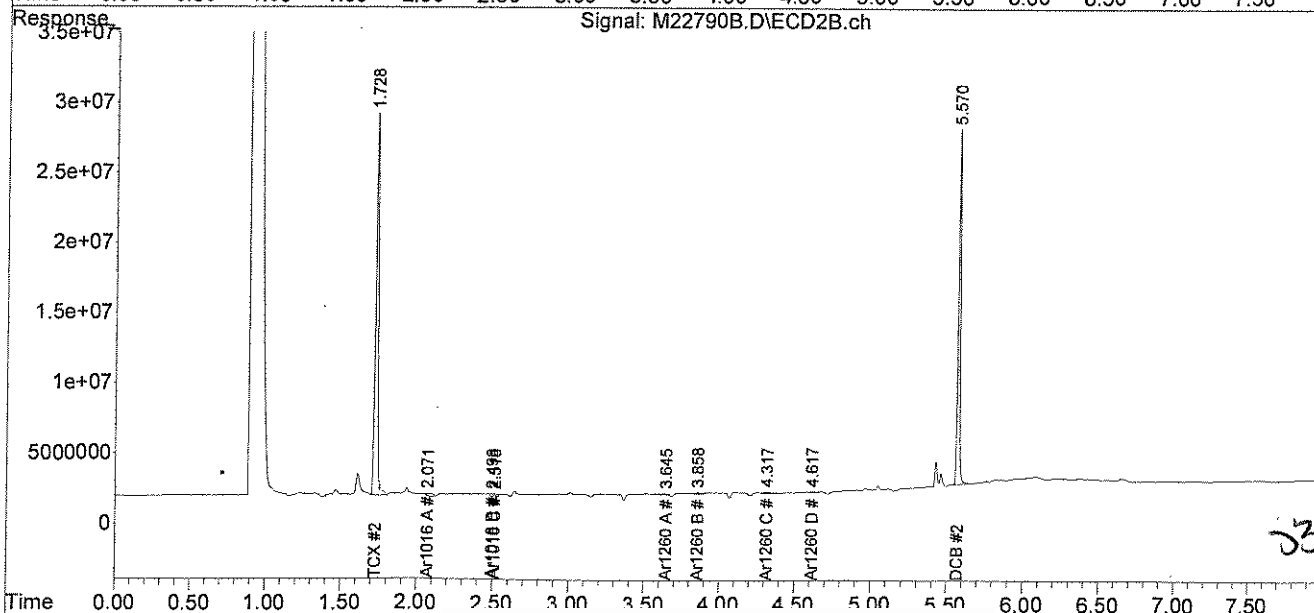
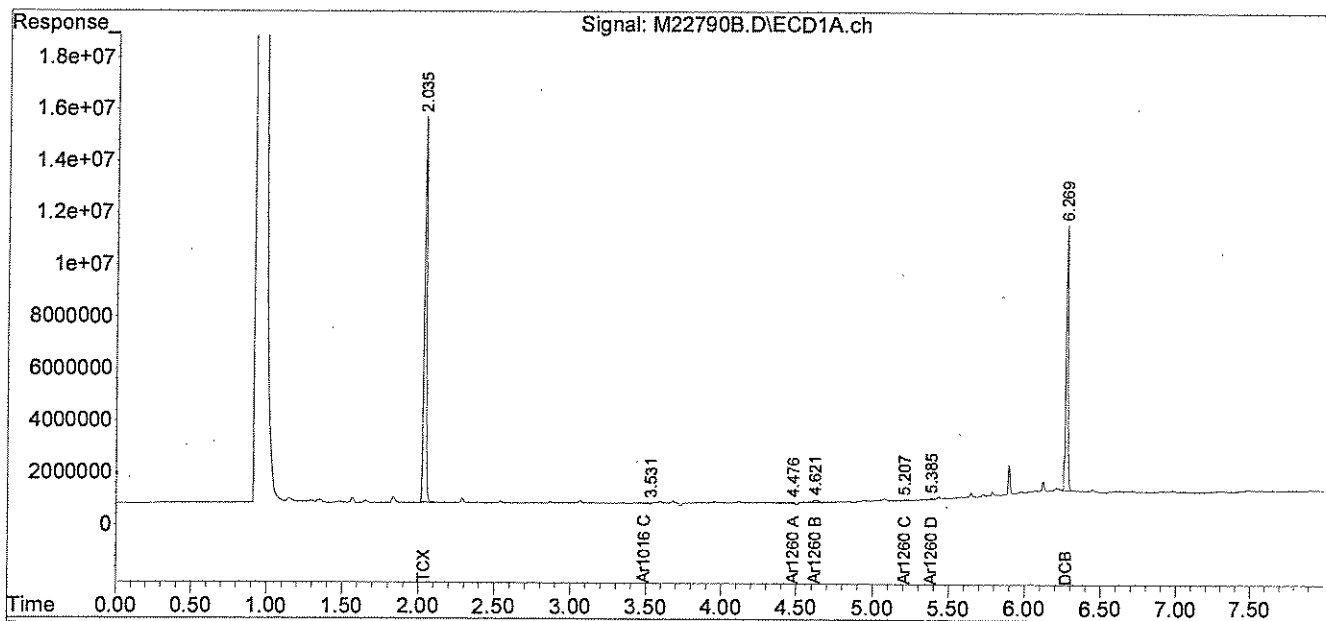
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\030510-M\
 Data File : M22790B.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 5 Mar 2010 5:27 pm
 Operator : RM
 Sample : B020810PAS,RR2,,A/C
 Misc : SOIL
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Mar 08 13:18:35 2010
 Quant Method : C:\msdchem\1\METHODS\PCB020410.M
 Quant Title : Aroclor 1016/1260
 QLast Update : Thu Feb 04 11:18:55 2010
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal #1 Phase :
 Signal #1 Info :
 Signal #2 Phase :
 Signal #2 Info :

Handwritten: 03-08-10



Handwritten: 03-08-10

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

March 16, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: Lab QC

Lab Sample ID: B030210PSOX RR2
Matrix: Soil
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date:
Lab Receipt Date:
Extraction Date: 03/02/10
Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	U
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	89	%
Decachlorobiphenyl	82	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

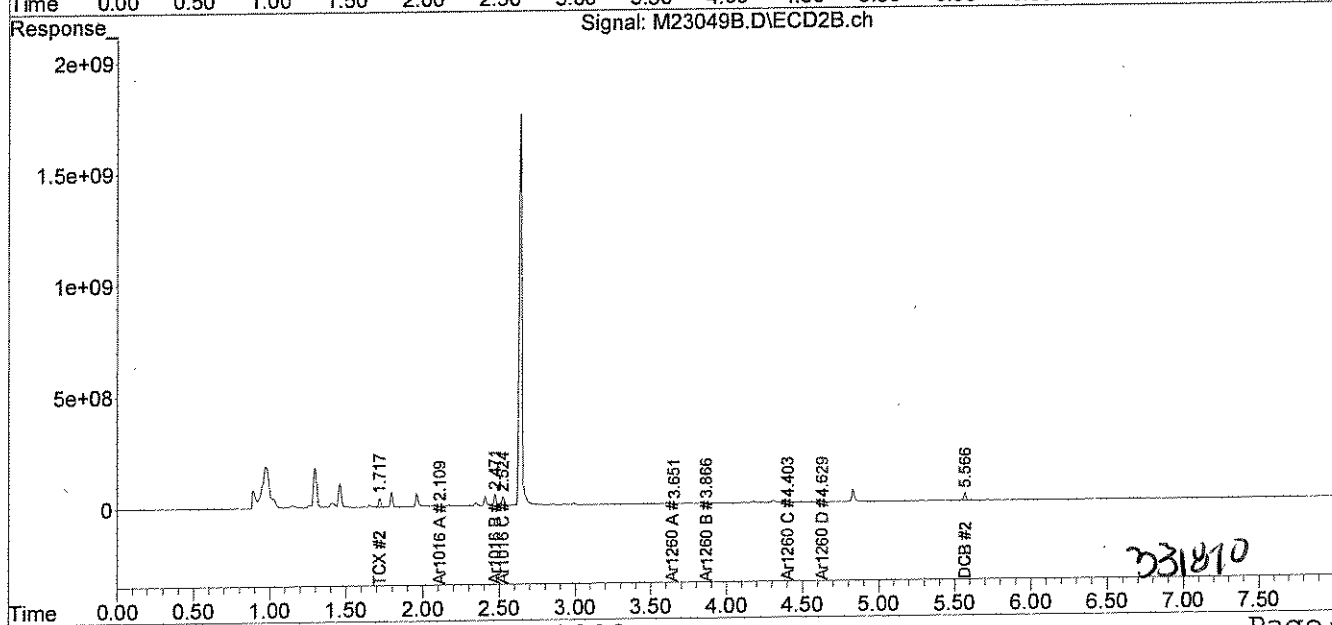
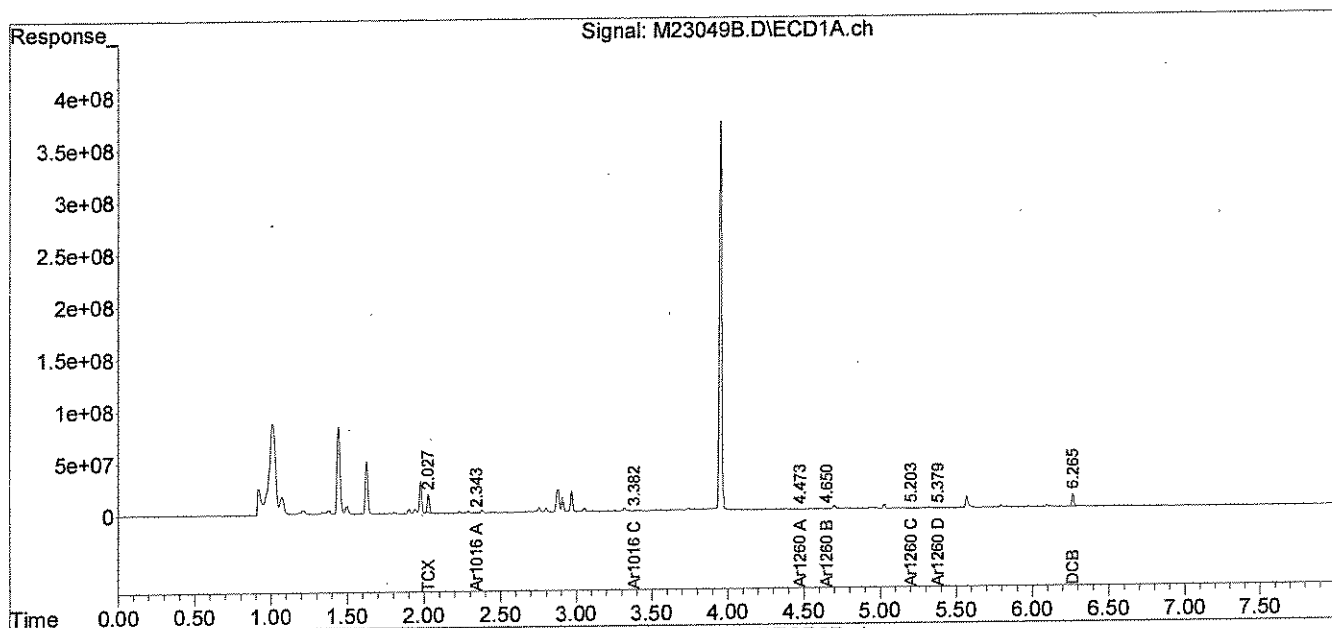
COMMENTS: Results are expressed on a dry weight basis.

Data Path : C:\msdchem\1\DATA\031210-M\
 Data File : M23049B.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Mar 2010 4:33 pm
 Operator : JK
 Sample : B030210PSOX,RR2,,A/C
 Misc : SOIL
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Mar 15 08:28:01 2010
 Quant Method : C:\msdchem\1\METHODS\PCB020410.M
 Quant Title : Aroclor 1016/1260
 QLast Update : Thu Feb 04 11:18:55 2010
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal #1 Phase :
 Signal #1 Info :
 Signal #2 Phase:
 Signal #2 Info :

OK
 3-15-10



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

March 16, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: Lab QC

Lab Sample ID: B030210PSOX RR3
Matrix: Soil
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date:
Lab Receipt Date:
Extraction Date: 03/02/10
Analysis Date: 03/15/10

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	U
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	107 %	
Decachlorobiphenyl	91 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

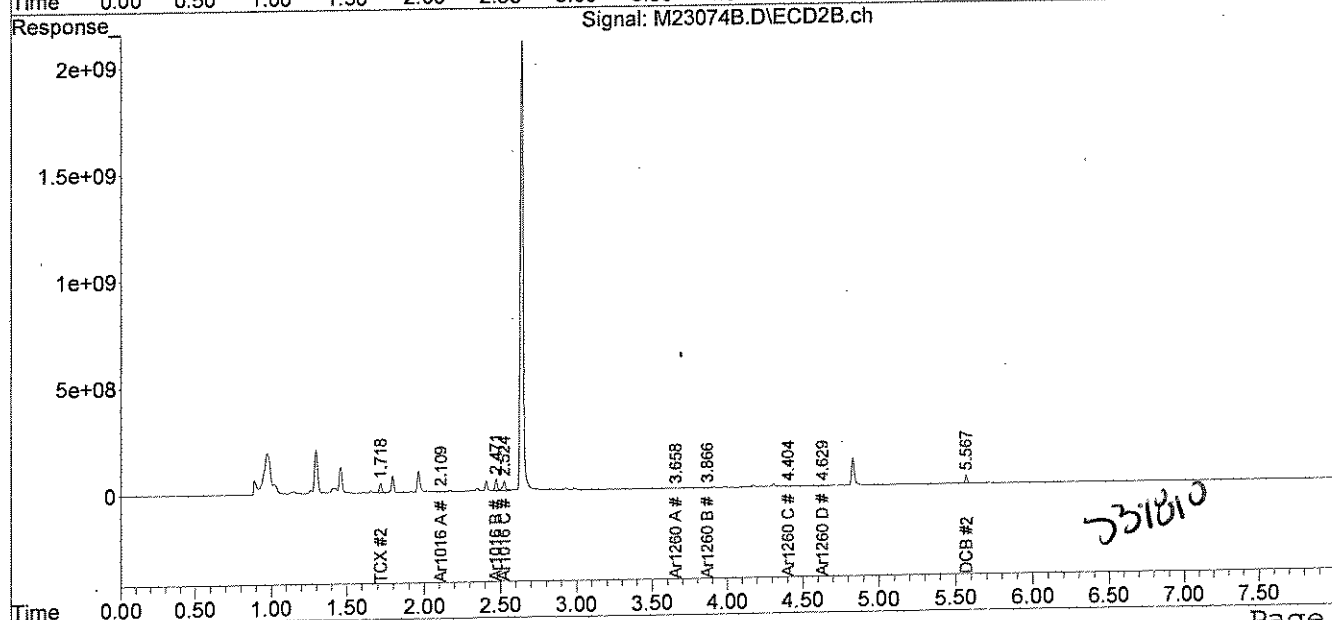
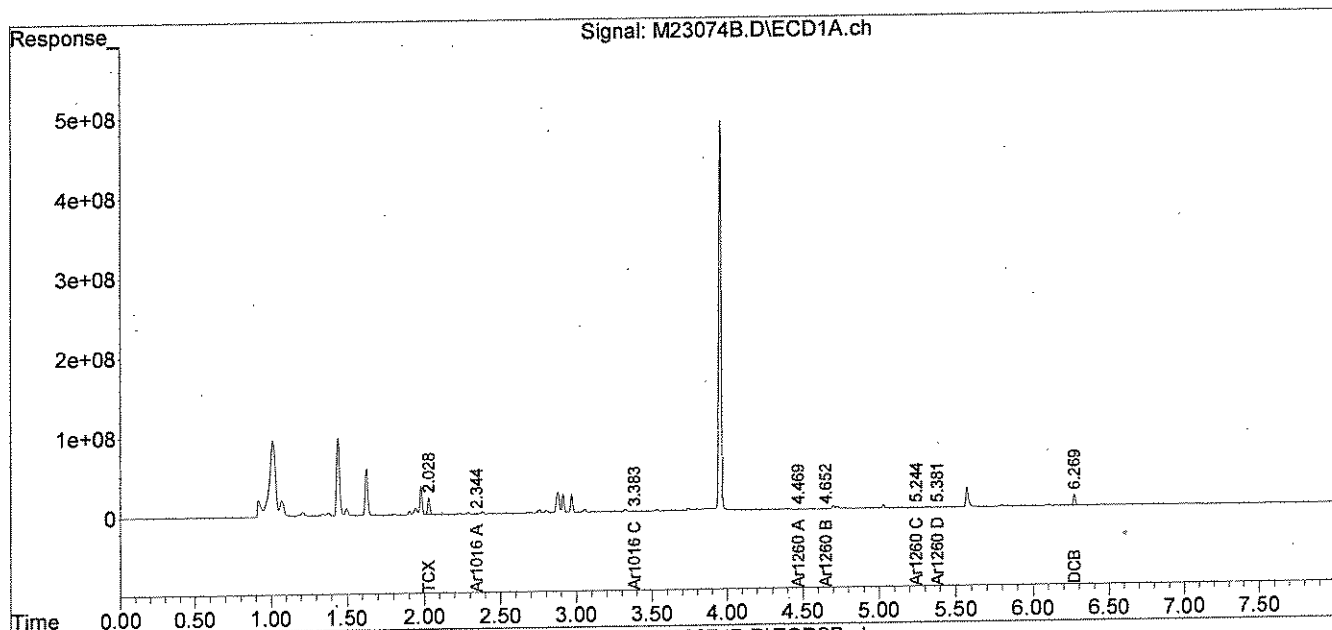


Data Path : C:\msdchem\1\DATA\031510-M\
 Data File : M23074B.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 15 Mar 2010 2:17 pm
 Operator : JK
 Sample : B030210PSOX,RR3,,A/C
 Misc : SOIL
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Mar 16 08:20:45 2010
 Quant Method : C:\msdchem\1\METHODS\PCB020410.M
 Quant Title : Aroclor 1016/1260
 QLast Update : Thu Feb 04 11:18:55 2010
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal #1 Phase :
 Signal #1 Info :
 Signal #2 Phase:
 Signal #2 Info :

JK
 03-16-10



031810

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-001

Lab Sample ID: 65950-1 RX
Matrix: Solid
Percent Solid: 99
Dilution Factor: 9330
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	308000	U
PCB-1221	308000	U
PCB-1232	308000	U
PCB-1242	308000	U
PCB-1248	308000	U
PCB-1254	308000	7680000
PCB-1260	308000	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB Report

Authorized signature



PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-1,RX,1000X,,A/C

Column ID: 0.25 mm

Data File: M23054.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 9325.5

Column ID: 0.25 mm

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1245	5962007	7675756	25.1

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

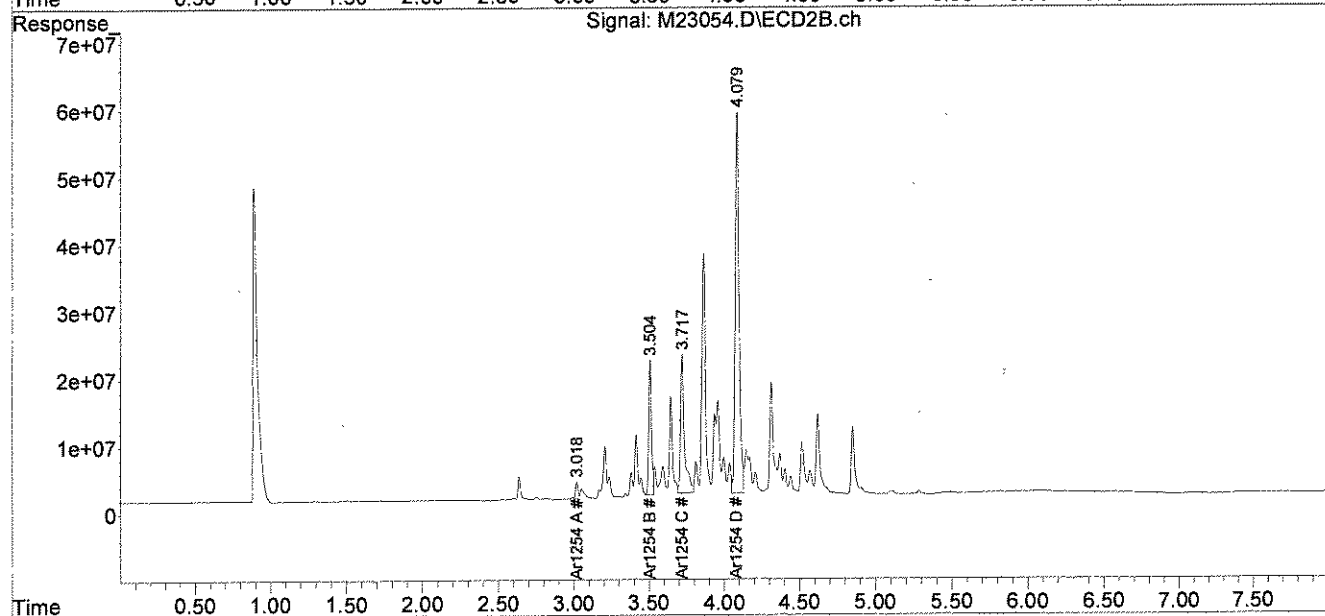
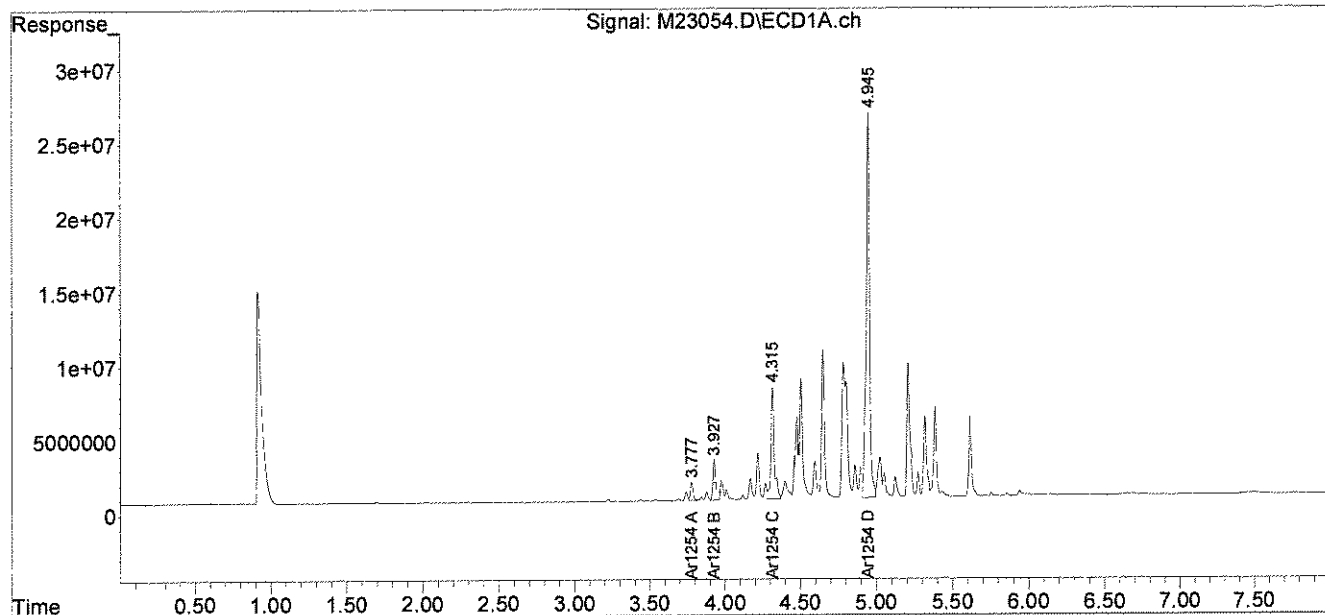
Comments: _____

Data Path : C:\msdchem\1\DATA\031210-M\
Data File : M23054.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Mar 2010 5:42 pm
Operator : JK
Sample : 65950-1,RX,1000X,,A/C
Misc : SOIL
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Mar 15 09:27:52 2010
Quant Method : C:\msdchem\1\METHODS\54SP020410.M
Quant Title :
QLast Update : Fri Feb 05 08:08:17 2010
Response via : Initial Calibration
Integrator: ChemStation

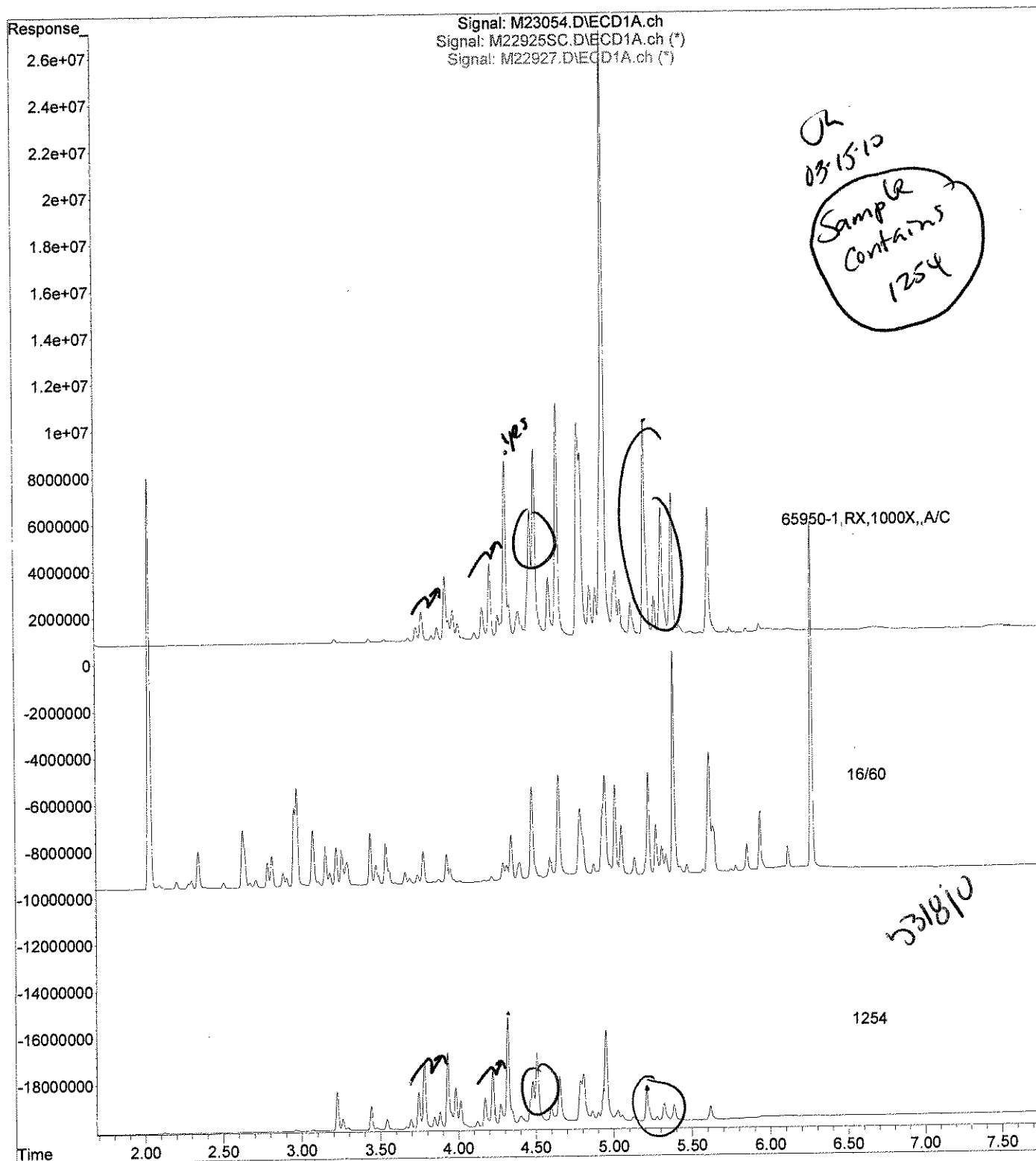
Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase :
Signal #2 Info :

OK
03-15-10



531810

File : C:\msdchem\1\DATA\031210-M\M23054.D
Operator : JK
Acquired : 12 Mar 2010 5:42 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-1,RX,1000X,,A/C
Misc Info : SOIL
Vial Number: 10



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons

Project Number: 222822

Field Sample ID: UMSC-CBK-002

Lab Sample ID: 65950-2 RX

Matrix: Solid

Percent Solid: 99

Dilution Factor: 498

Collection Date: 02/25/10

Lab Receipt Date: 02/26/10

Extraction Date: 03/02/10

Analysis Date: 03/05/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	16400	U
PCB-1221	16400	U
PCB-1232	16400	U
PCB-1242	16400	U
PCB-1248	16400	U
PCB-1254	16400	171000
PCB-1260	16400	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-2,RX,1:50,,A/C

Column ID: 0.25 mm

Data File: M22793.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 498.4

Column ID: 0.25 mm

COMPOUND	Column #1	Column #2	RPD		#
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1254	162702	171360	5.2		

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

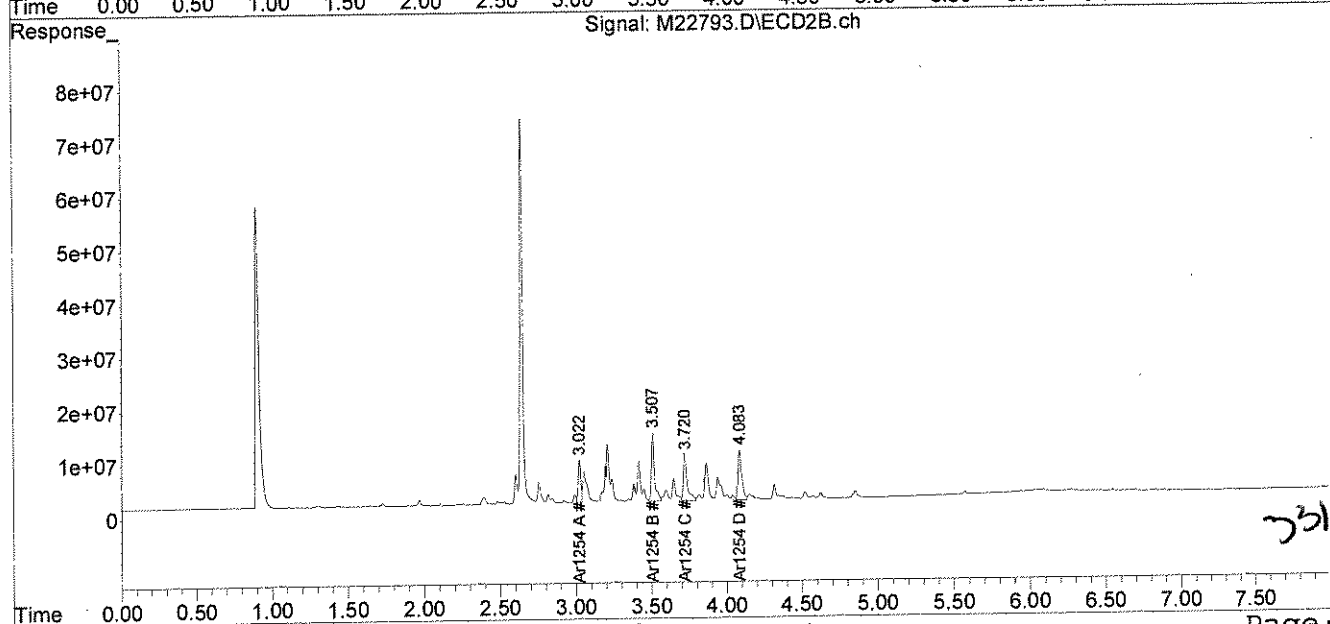
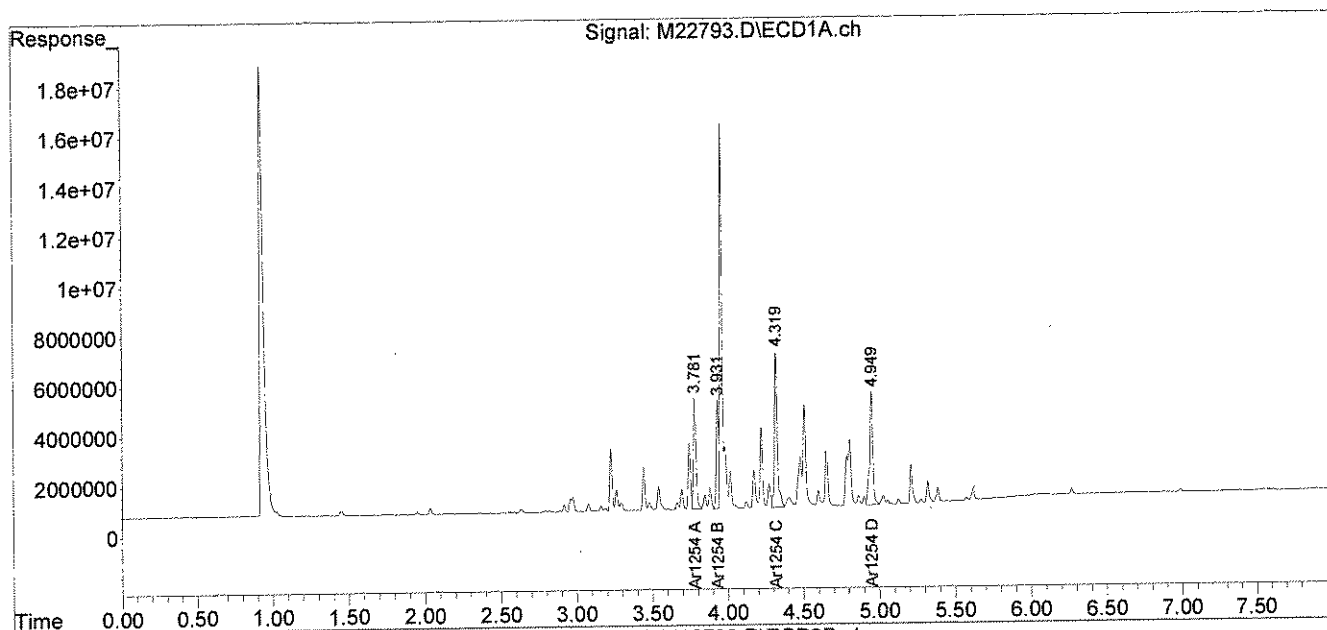
Comments: _____

548 Data Path : C:\msdchem\1\DATA\030510-M\
Data File : M22793.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 5 Mar 2010 5:57 pm
Operator : RM
Sample : 65950-2,RX,1:50,,A/C
Misc : SOIL
ALS Vial : 13 Sample Multiplier: 1

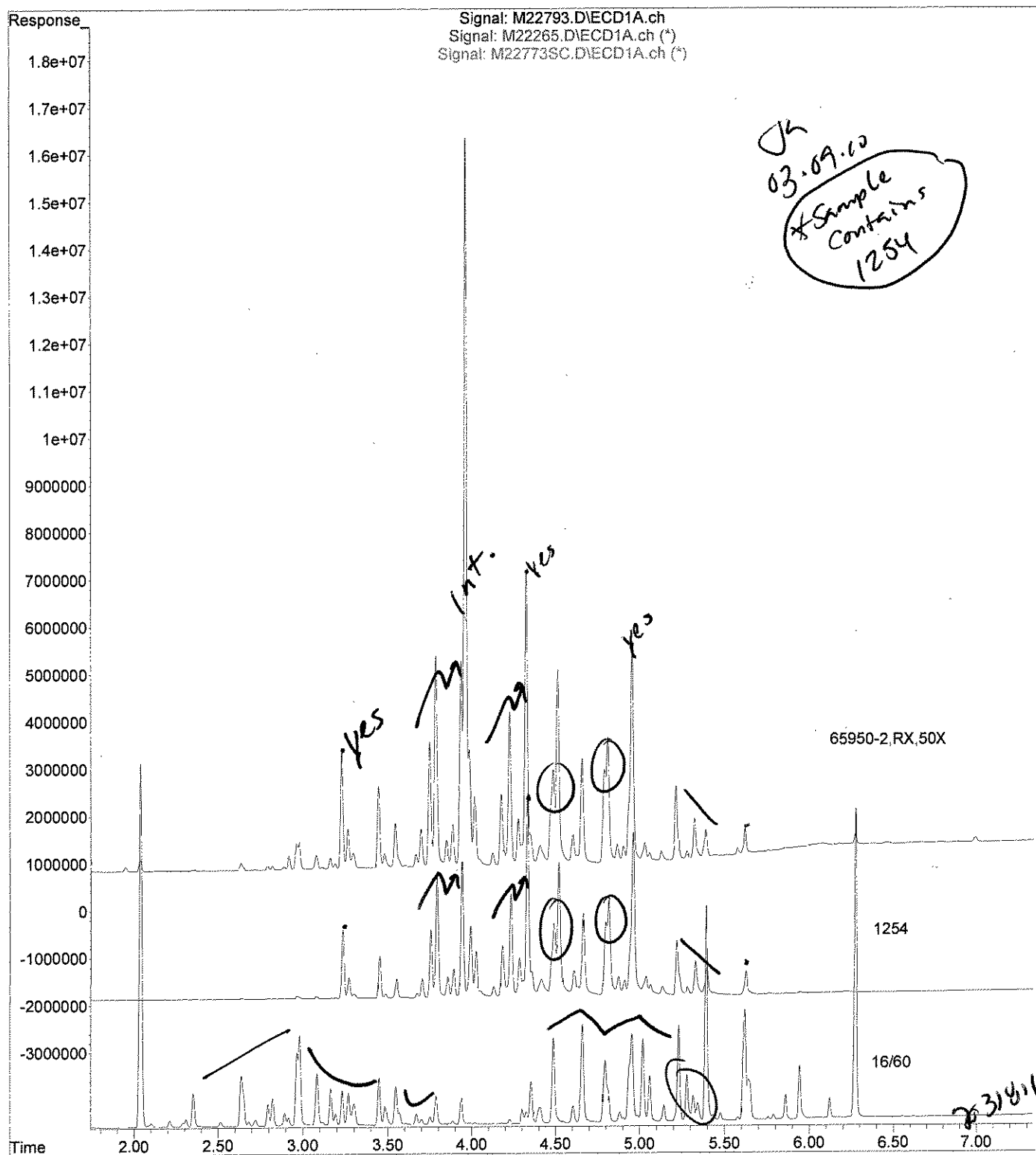
Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Mar 09 09:19:45 2010
Quant Method : C:\msdchem\1\METHODS\54SP020410.M
Quant Title :
QLast Update : Fri Feb 05 08:08:17 2010
Response via : Initial Calibration
Integrator: ChemStation

548 Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info:

Ch
03.09.10



File : C:\msdchem\1\DATA\030510-M\M22793.D
Operator : RM
Acquired : 5 Mar 2010 5:57 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-2,RX,1:50,,A/C
Misc Info : SOIL
Vial Number: 13



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-003

Lab Sample ID: 65950-3 RX
Matrix: Solid
Percent Solid: 99
Dilution Factor: 83
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	2740	U
PCB-1221	2740	U
PCB-1232	2740	U
PCB-1242	2740	U
PCB-1248	2740	U
PCB-1254	2740	34800
PCB-1260	2740	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	120	%
Decachlorobiphenyl	102	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-3,RX,10X,,A/C

Column ID: 0.25 mm

Data File: M23055.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 83.3

Column ID: 0.25 mm

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	34208	34760	1.6

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

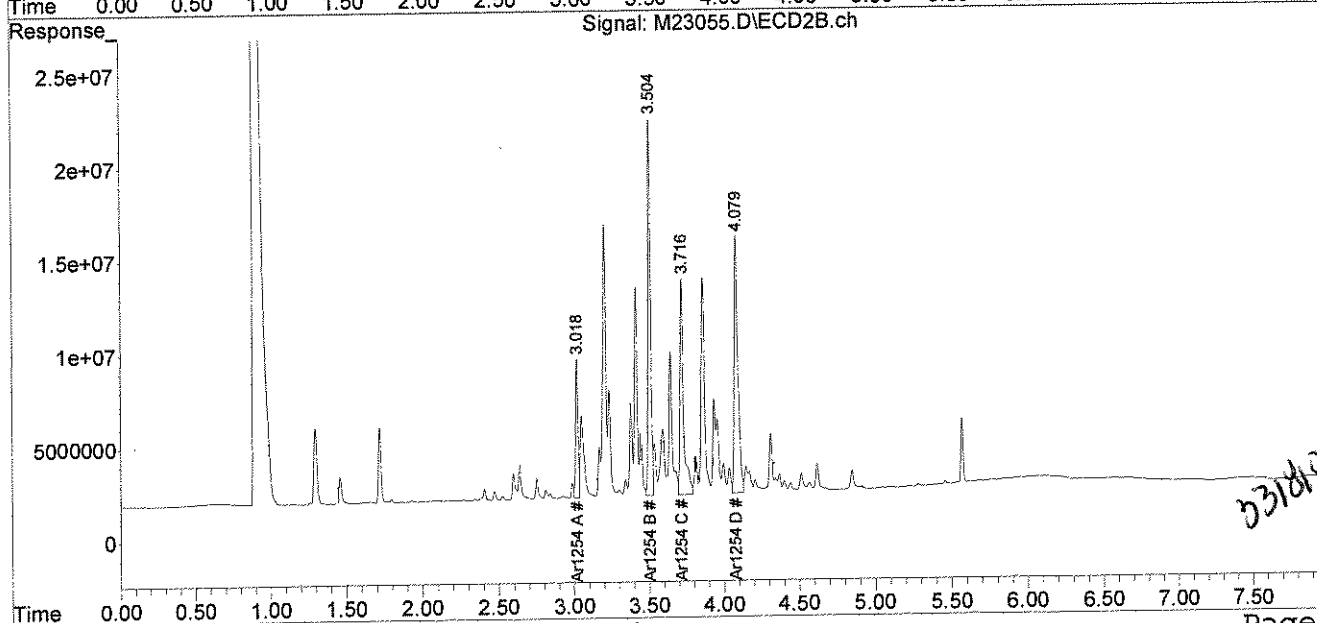
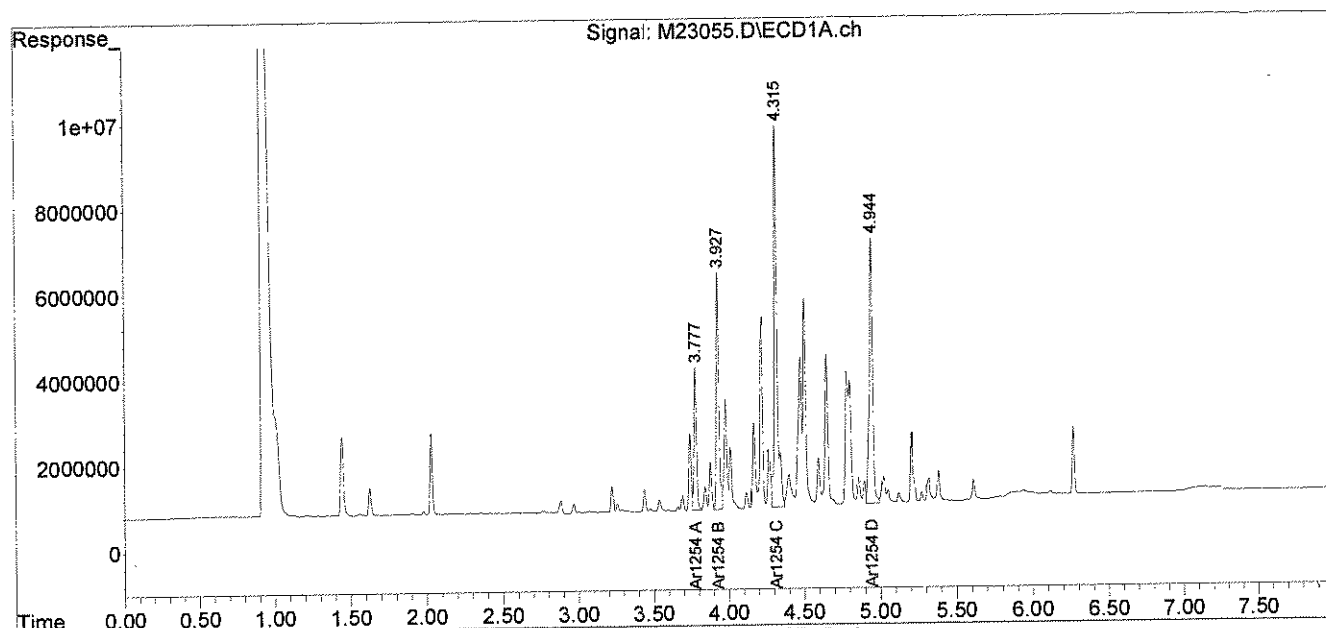
Comments: _____

Data Path : C:\msdchem\1\DATA\031210-M\
Data File : M23055.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Mar 2010 5:52 pm
Operator : JK
Sample : 65950-3,RX,10X,,A/C
Misc : SOIL
ALS Vial : 11 Sample Multiplier: 1

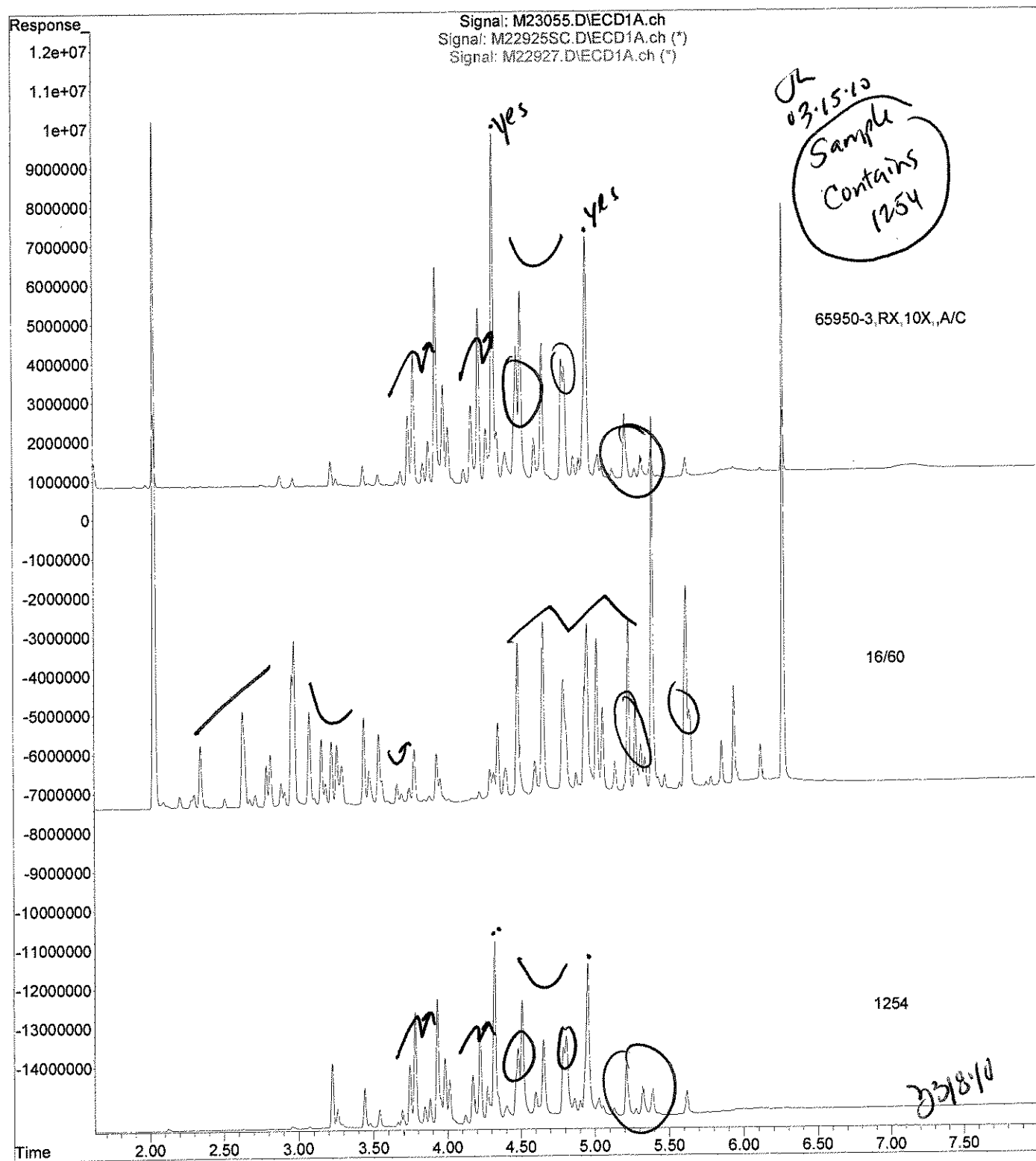
Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Mar 15 08:52:01 2010
Quant Method : C:\msdchem\1\METHODS\54SP020410.M
Quant Title :
QLast Update : Fri Feb 05 08:08:17 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

R
03:15W



File : C:\msdchem\1\DATA\031210-M\M23055.D
Operator : JK
Acquired : 12 Mar 2010 5:52 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-3,RX,10X,,A/C
Misc Info : SOIL
Vial Number: 11



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March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-004

Lab Sample ID: 65950-4 RX
Matrix: Solid
Percent Solid: 96
Dilution Factor: 478000
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	15774000	U
PCB-1221	15774000	U
PCB-1232	15774000	U
PCB-1242	15774000	U
PCB-1248	15774000	U
PCB-1254	15774000	167000000
PCB-1260	15774000	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-4,RX,50000X,,A/C

Column ID: 0.25 mm

Data File: M23056.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 478476.7

Column ID: 0.25 mm

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	153813746	166767067	8.1

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

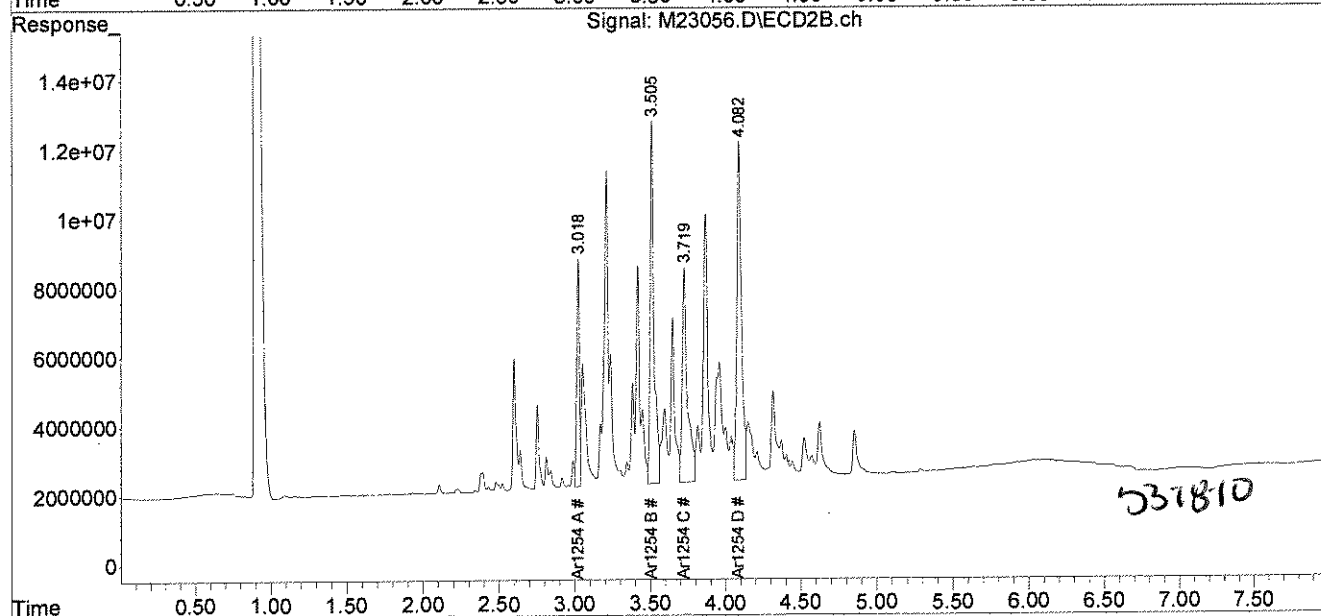
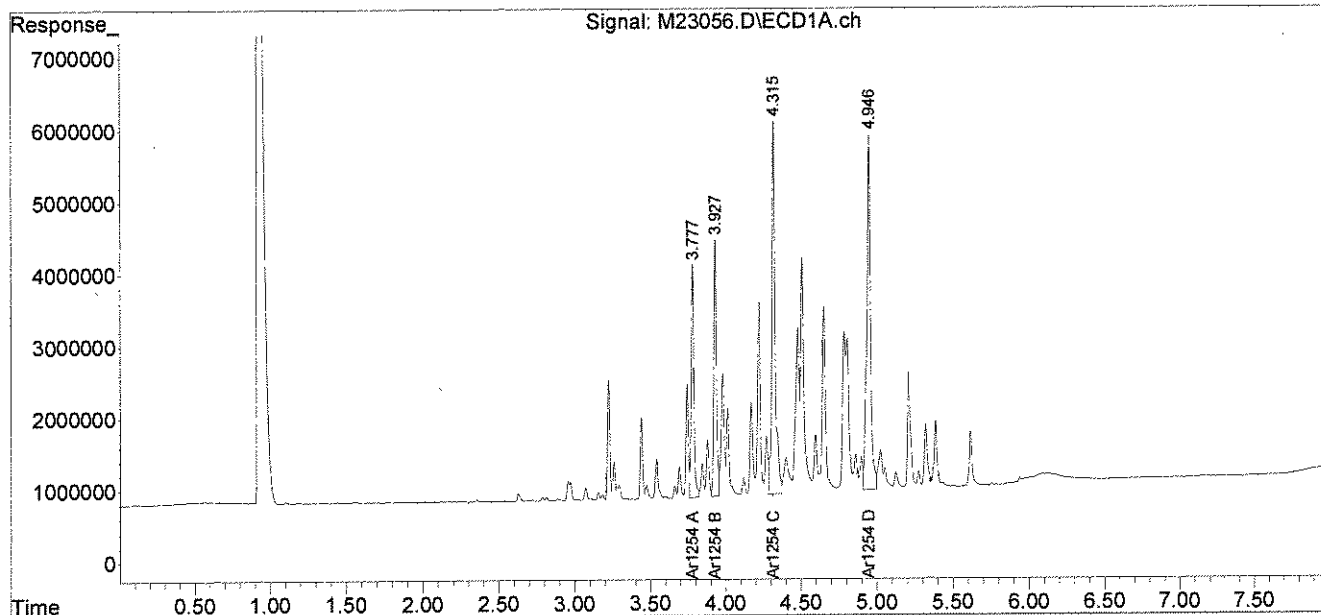
Comments: _____

Data Path : C:\msdchem\1\DATA\031210-M\
Data File : M23056.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Mar 2010 6:03 pm
Operator : JK
Sample : 65950-4,RX,50000X,,A/C
Misc : SOIL
ALS Vial : 12 Sample Multiplier: 1

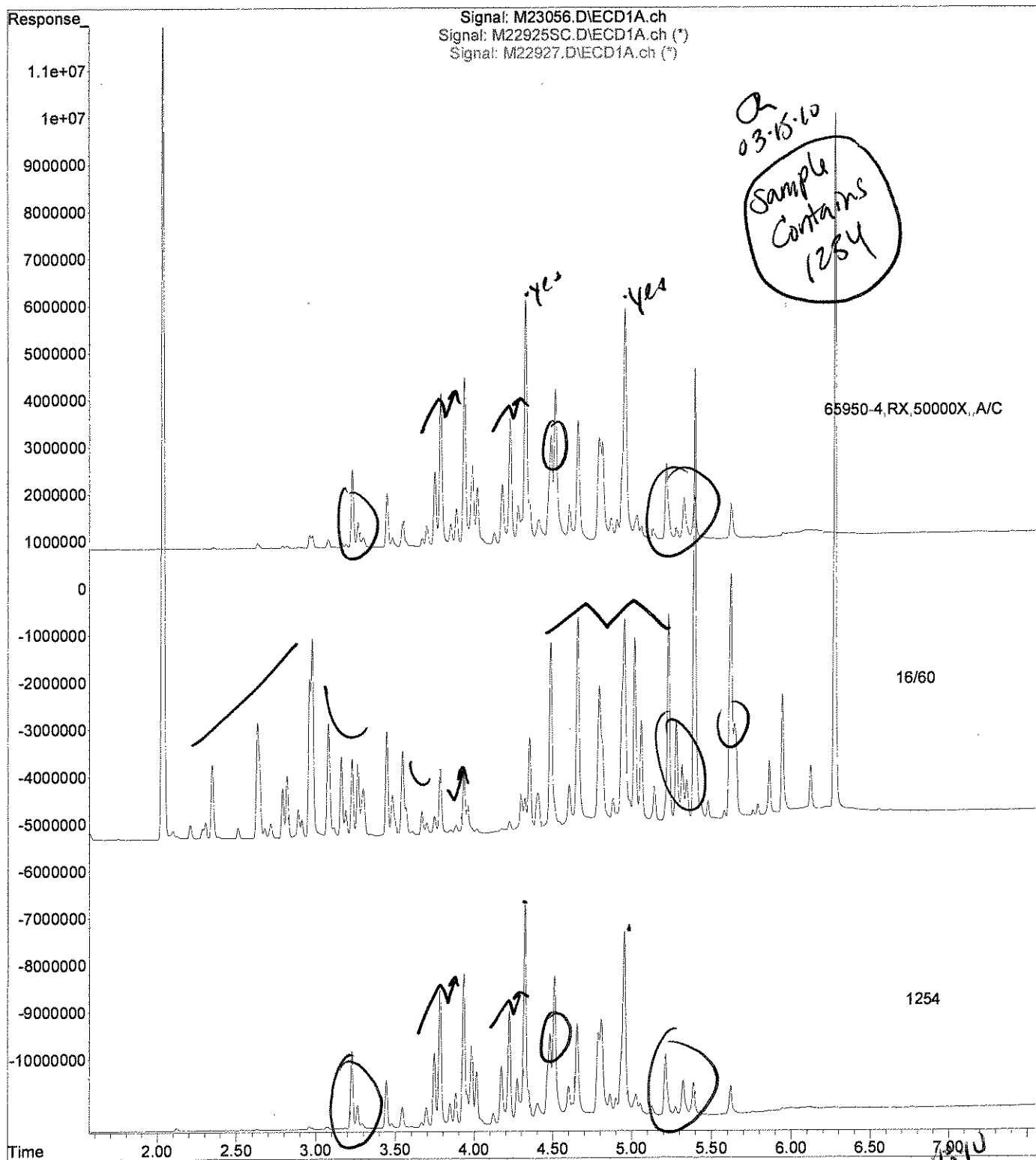
Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Mar 15 08:52:18 2010
Quant Method : C:\msdchem\1\METHODS\54SP020410.M
Quant Title :
QLast Update : Fri Feb 05 08:08:17 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase :
Signal #2 Info :

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03-15-10



File : C:\msdchem\1\DATA\031210-M\M23056.D
Operator : JK
Acquired : 12 Mar 2010 6:03 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-4,RX,50000X,,A/C
Misc Info : SOIL
Vial Number: 12



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March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-005

Lab Sample ID: 65950-5 RX
Matrix: Solid
Percent Solid: 98
Dilution Factor: 513000
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	16929000	U
PCB-1221	16929000	U
PCB-1232	16929000	U
PCB-1242	16929000	U
PCB-1248	16929000	U
PCB-1254	16929000	135000000
PCB-1260	16929000	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.



PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-5,RX,50000X,,A/C

Column ID: 0.25 mm

Data File: M23057.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 512557.7

Column ID: 0.25 mm

COMPOUND	Column #1	Column #2	RPD		#
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1254	123434713	134652358	8.7		

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

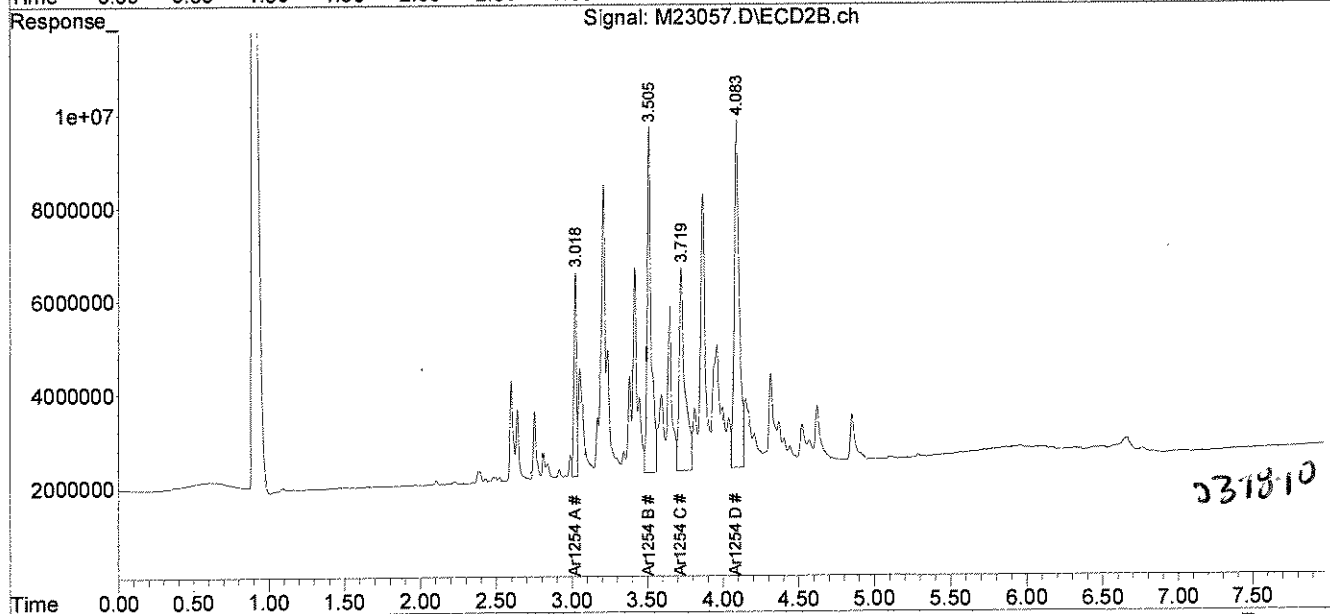
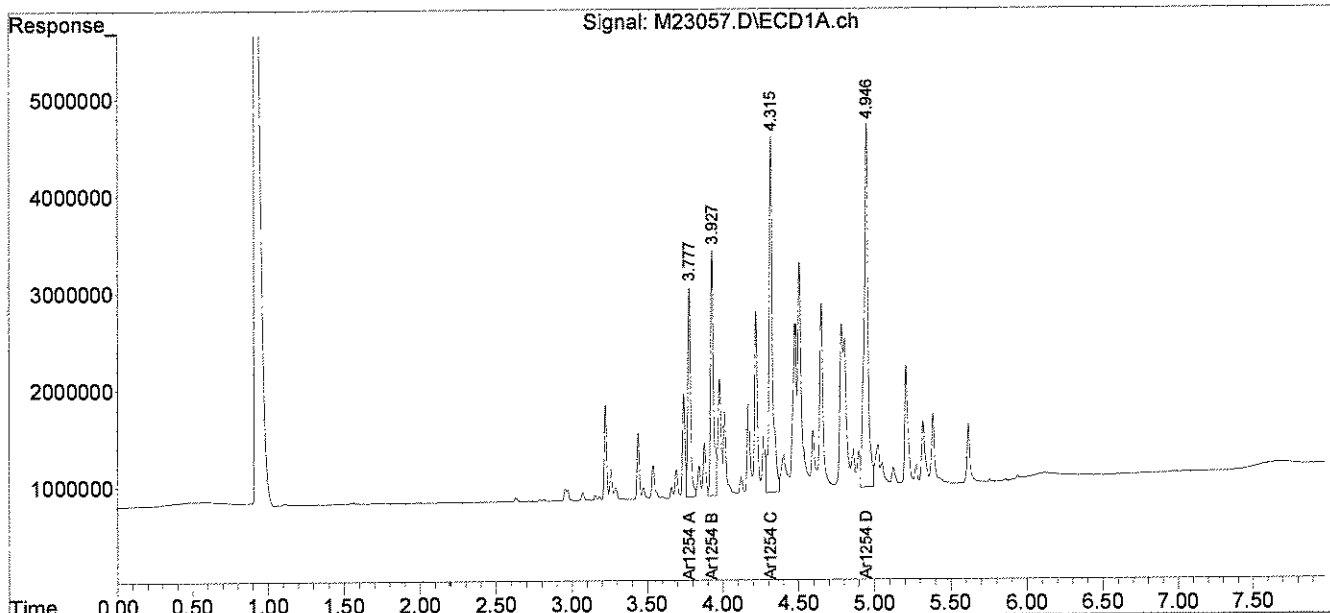
Comments: _____

Data Path : C:\msdchem\1\DATA\031210-M\
 Data File : M23057.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Mar 2010 6:13 pm
 Operator : JK
 Sample : 65950-5,RX,50000X,,A/C
 Misc : SOIL
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Mar 15 08:52:33 2010
 Quant Method : C:\msdchem\1\METHODS\54SP020410.M
 Quant Title :
 QLast Update : Fri Feb 05 08:08:17 2010
 Response via : Initial Calibration
 Integrator: ChemStation

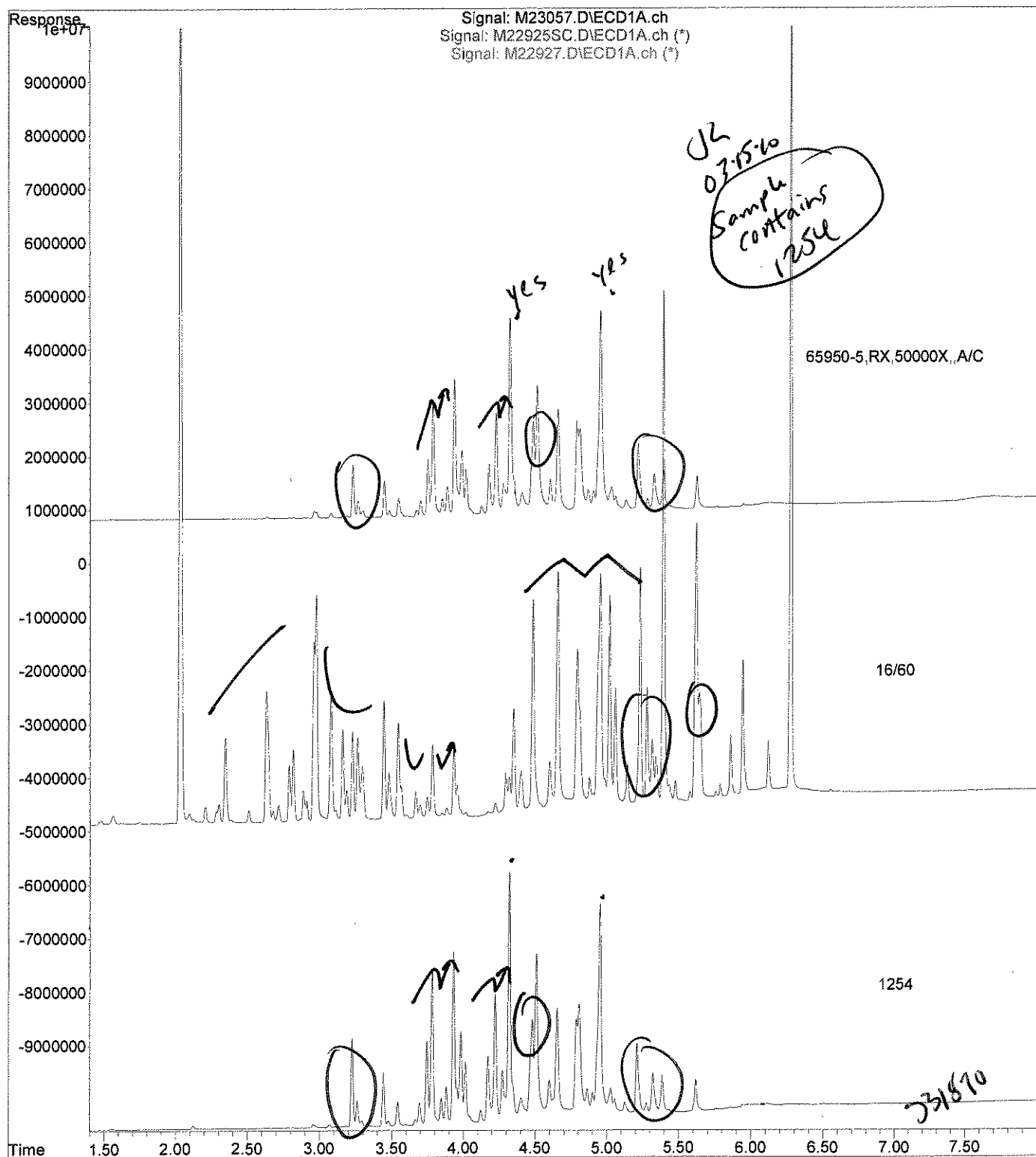
Volume Inj. :
 Signal #1 Phase :
 Signal #1 Info :
 Signal #2 Phase :
 Signal #2 Info :

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13-15-10

File : C:\msdchem\1\DATA\031210-M\M23057.D
Operator : JK
Acquired : 12 Mar 2010 6:13 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-5,RX,50000X,,A/C
Misc Info : SOIL
Vial Number: 13



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March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-006

Lab Sample ID: 65950-6 RX
Matrix: Solid
Percent Solid: 98
Dilution Factor: 798000
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	26334000	U
PCB-1221	26334000	U
PCB-1232	26334000	U
PCB-1242	26334000	U
PCB-1248	26334000	U
PCB-1254	26334000	405000000
PCB-1260	26334000	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-6,RX,100000X,,A/C

Column ID: 0.25 mm

Data File: M23058.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 798008.2

Column ID: 0.25 mm

Column #1		Column #2		RPD	#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1254	355191143	405490795		13.2	

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

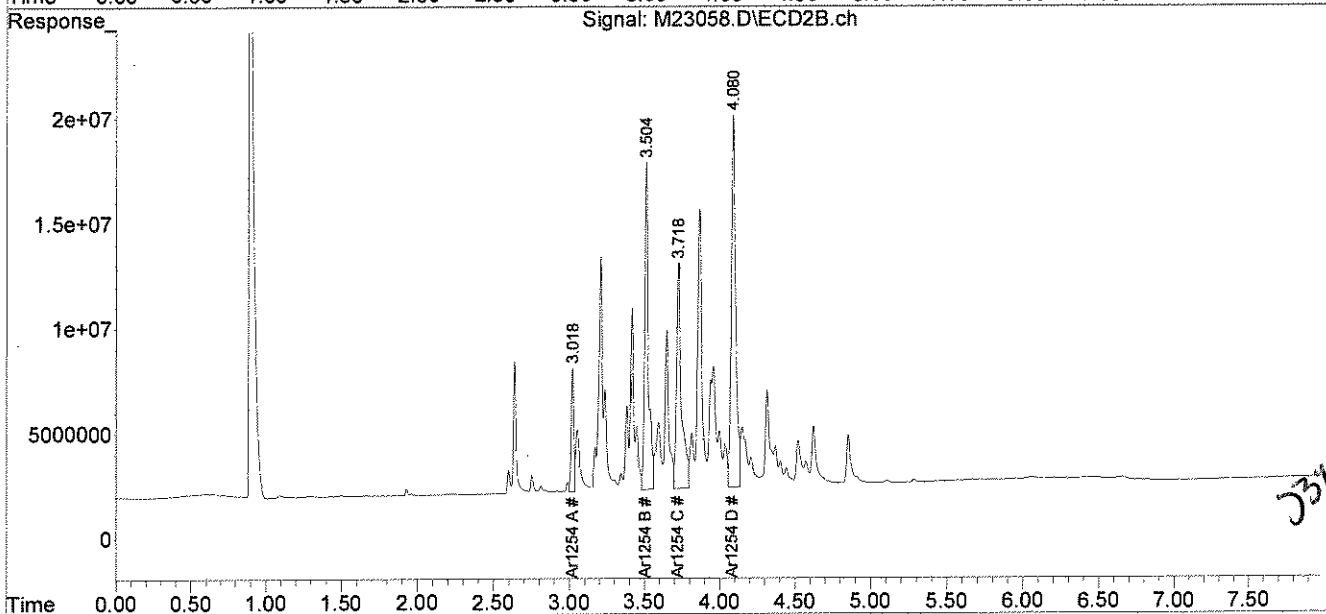
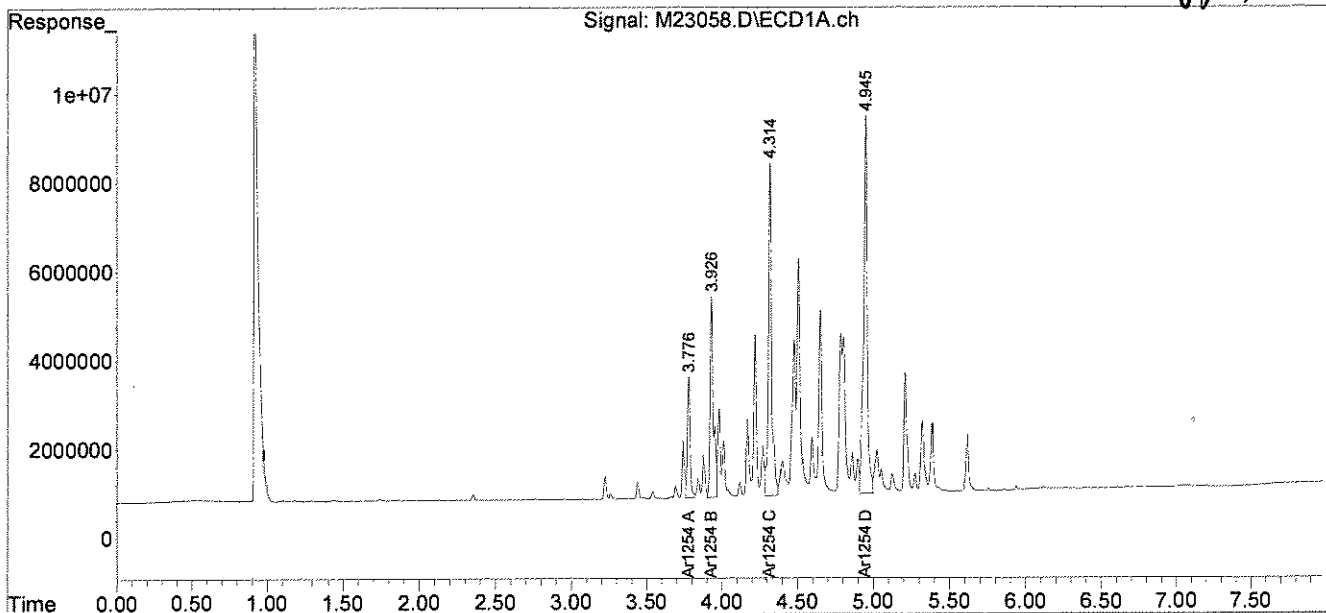
Comments: _____

Data Path : C:\msdchem\1\DATA\031210-M\
Data File : M23058.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Mar 2010 6:23 pm
Operator : JK
Sample : 65950-6,RX,100000X,,A/C
Misc : SOIL
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Mar 15 08:52:49 2010
Quant Method : C:\msdchem\1\METHODS\54SP020410.M
Quant Title :
QLast Update : Fri Feb 05 08:08:17 2010
Response via : Initial Calibration
Integrator: ChemStation

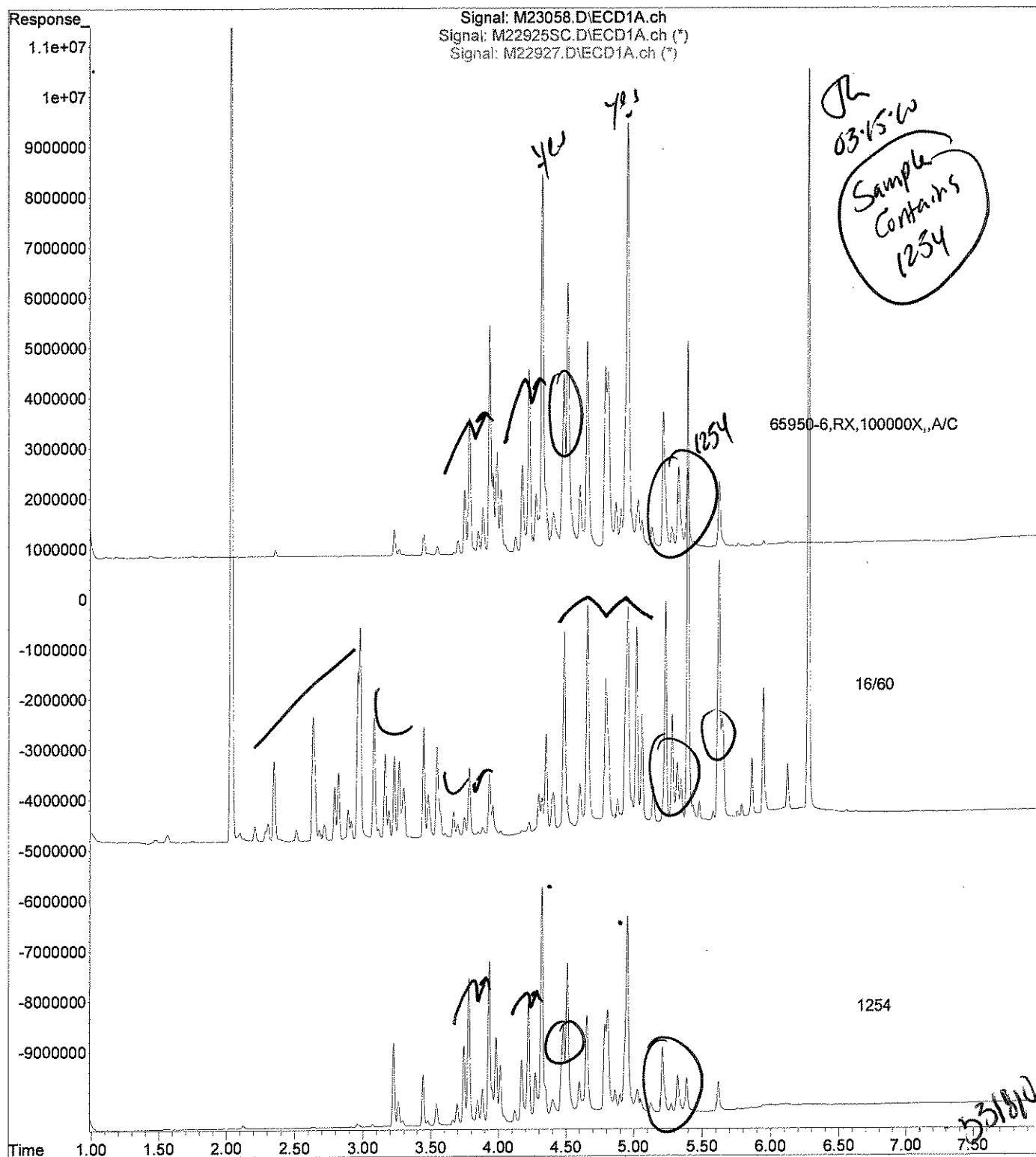
Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase :
Signal #2 Info :

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File : C:\msdchem\1\DATA\031210-M\M23058.D
Operator : JK
Acquired : 12 Mar 2010 6:23 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-6,RX,100000X,,A/C
Misc Info : SOIL
Vial Number: 14



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March 16, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-007

Lab Sample ID: 65950-7 RX
Matrix: Solid
Percent Solid: 99
Dilution Factor: 8
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/15/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	260	U
PCB-1221	260	U
PCB-1232	260	U
PCB-1242	260	U
PCB-1248	260	U
PCB-1254	260	3410
PCB-1260	260	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	87	%
Decachlorobiphenyl	80	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 65950
GC Column #1: STX-CLPesticides I	Sample: 65950-7,RX,,A/C
Column ID: 0.25 mm	Data File: M23075.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 8.2
Column ID: 0.25 mm	

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	3407	2631	25.7

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

Comments: _____

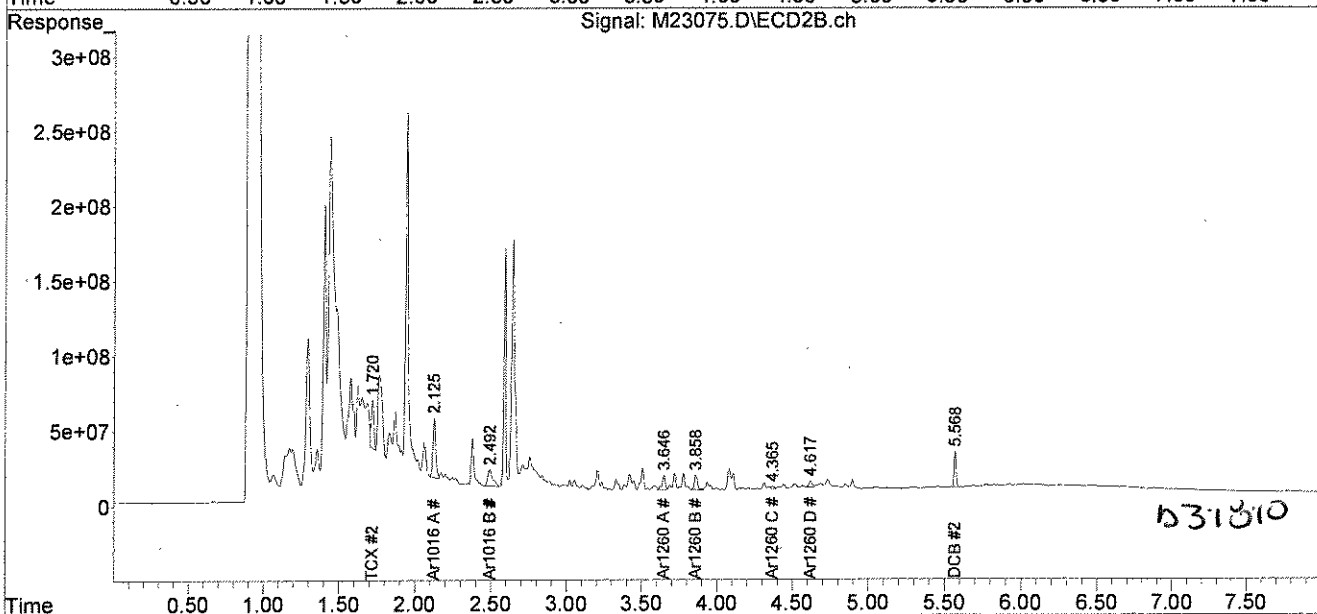
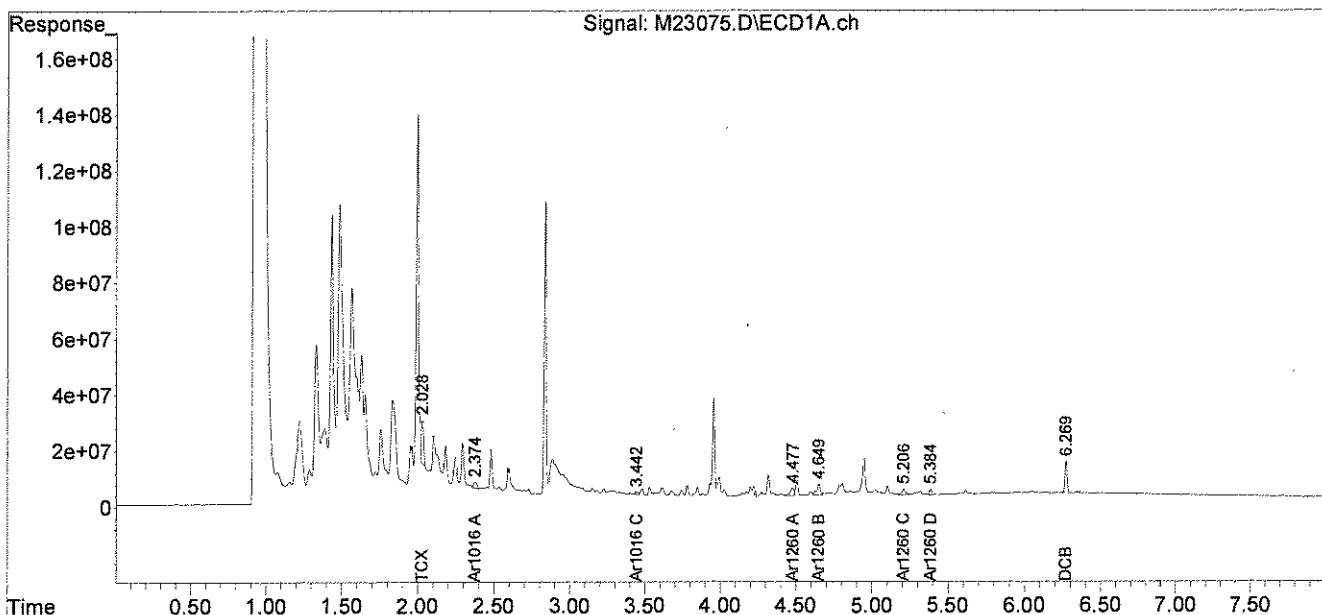
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\031510-M\
 Data File : M23075.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 15 Mar 2010 2:53 pm
 Operator : JK
 Sample : 65950-7,RX,,A/C
 Misc : SOIL
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Mar 16 08:13:47 2010
 Quant Method : C:\msdchem\1\METHODS\PCB020410.M
 Quant Title : Aroclor 1016/1260
 QLast Update : Thu Feb 04 11:18:55 2010
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal #1 Phase :
 Signal #1 Info :
 Signal #2 Phase :
 Signal #2 Info :

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March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons

Project Number: 222822

Field Sample ID: UMSC-CBK-008

Lab Sample ID: 65950-8 RX

Matrix: Solid

Percent Solid: 99

Dilution Factor: 85800

Collection Date: 02/25/10

Lab Receipt Date: 02/26/10

Extraction Date: 03/02/10

Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	2831000	U
PCB-1221	2831000	U
PCB-1232	2831000	U
PCB-1242	2831000	U
PCB-1248	2831000	U
PCB-1254	2831000	28000000
PCB-1260	2831000	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.



PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-8,RX,10000X,,A/C

Column ID: 0.25 mm

Data File: M23060.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 85783.7

Column ID: 0.25 mm

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	26635585	28009540	5.0

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

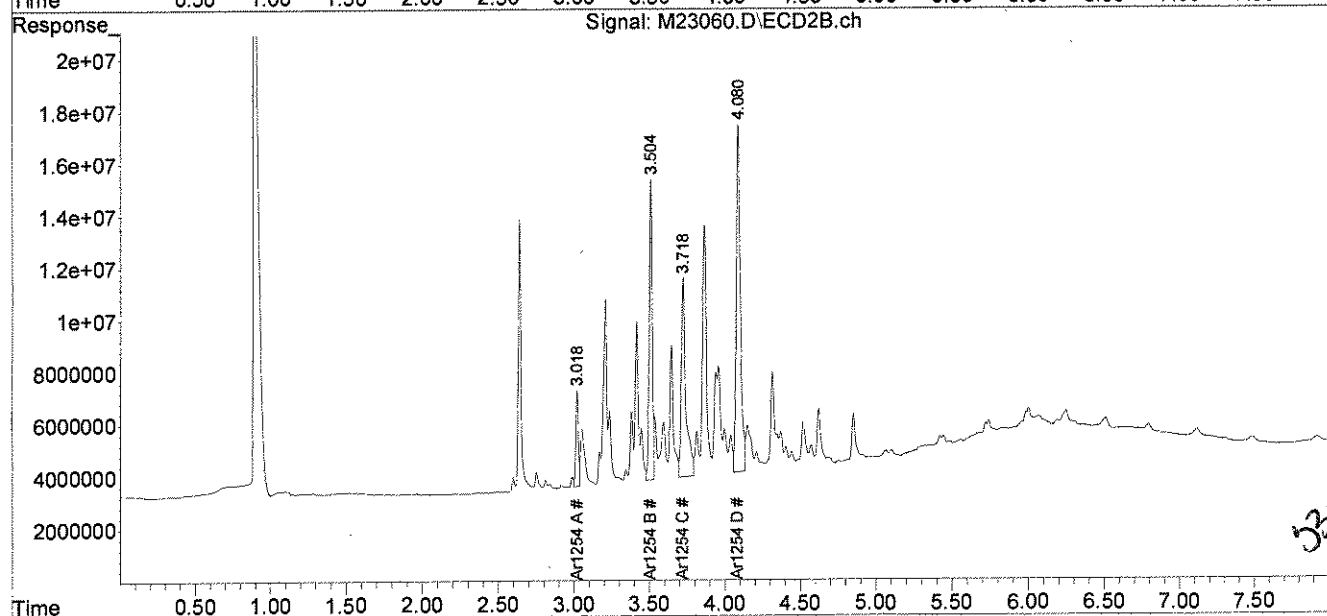
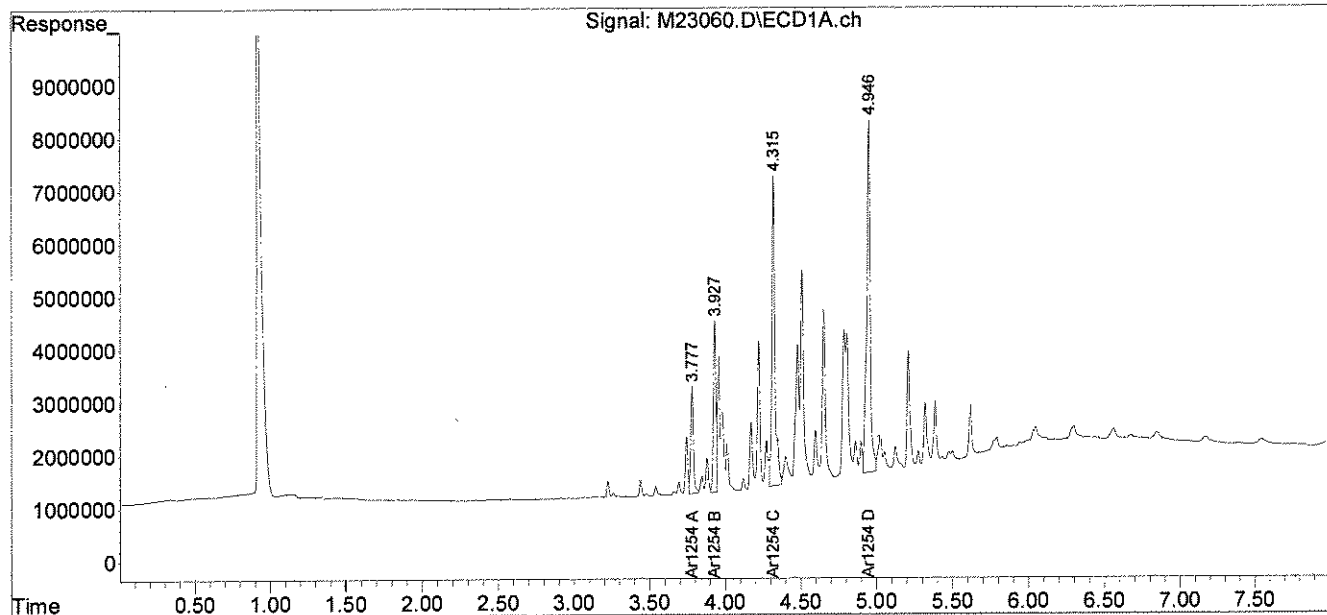
Comments: _____

Data Path : C:\msdchem\1\DATA\031210-M\
Data File : M23060.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Mar 2010 6:43 pm
Operator : JK
Sample : 65950-8,RX,10000X,,A/C
Misc : SOIL
ALS Vial : 16 Sample Multiplier: 1

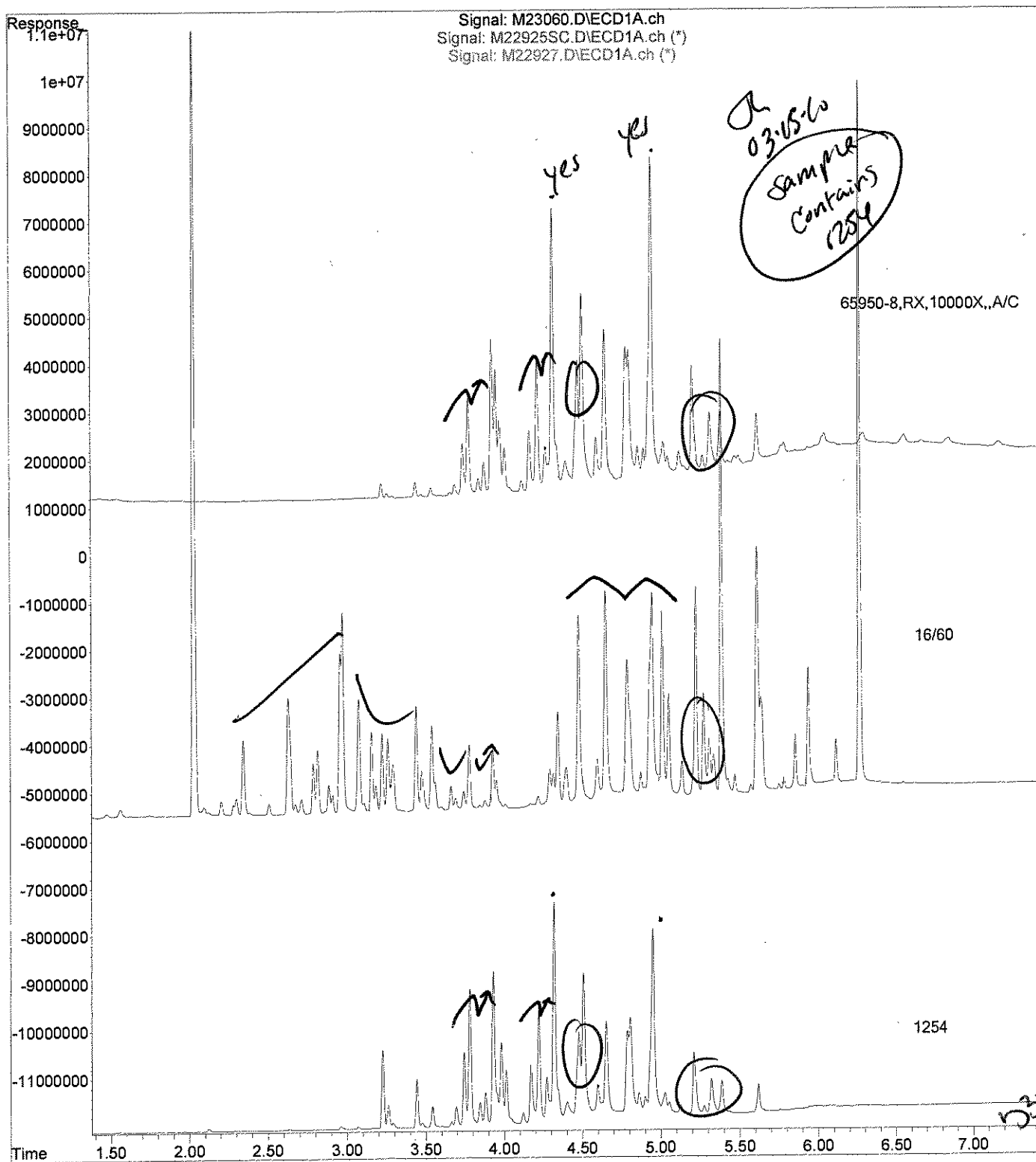
Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Mar 15 08:53:49 2010
Quant Method : C:\msdchem\1\METHODS\54SP020410.M
Quant Title :
QLast Update : Fri Feb 05 08:08:17 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase :
Signal #2 Info :

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03-15-10



File :C:\msdchem\1\DATA\031210-M\M23060.D
Operator : JK
Acquired : 12 Mar 2010 6:43 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-8,RX,10000X,,A/C
Misc Info : SOIL
Vial Number: 16



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March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-009

Lab Sample ID: 65950-9 RX
Matrix: Solid
Percent Solid: 88
Dilution Factor: 10
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	330	U
PCB-1221	330	U
PCB-1232	330	U
PCB-1242	330	U
PCB-1248	330	U
PCB-1254	330	U
PCB-1260	330	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	104	%
Decachlorobiphenyl	I	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis. Quantitation limits increased due to the sample matrix affect.
I=Unable to read surrogate results due to interference.



Data Path : C:\msdchem\1\DATA\031210-M\
Data File : M23061.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Mar 2010 6:53 pm
Operator : JK
Sample : 65950-9,RX,10X,,A/C
Misc : SOIL
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e

Integration File signal 2: events2.e

Quant Time: Mar 15 08:54:05 2010

Quant Method : C:\msdchem\1\METHODS\PCB020410.M

Quant Title : Aroclor 1016/1260

QLast Update : Thu Feb 04 11:18:55 2010

Response via : Initial Calibration

Integrator: ChemStation

Volume Inj. :

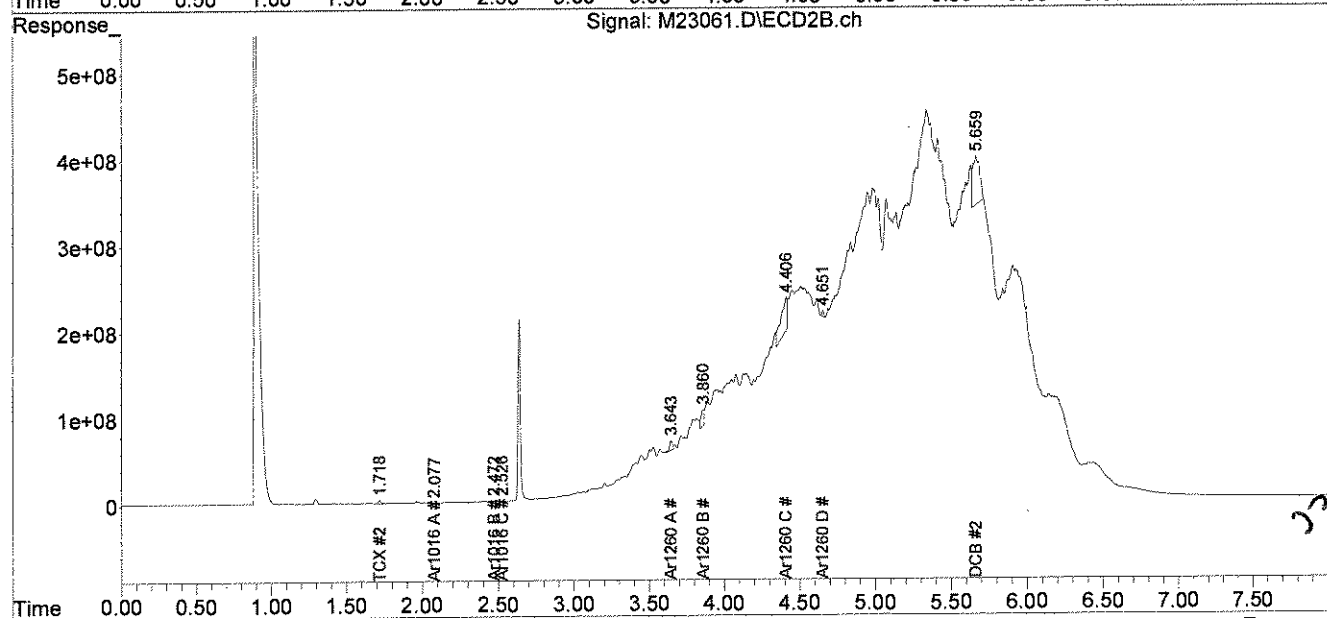
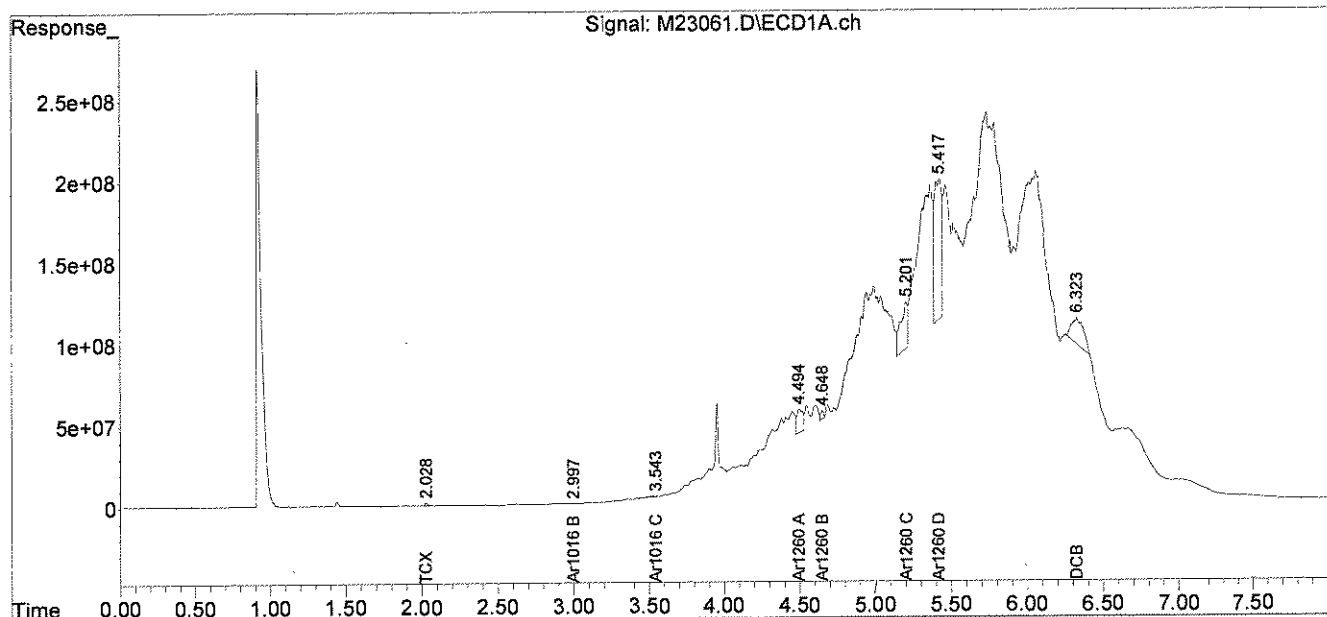
Signal #1 Phase :

Signal #1 Info :

Signal #2 Phase:

Signal #2 Info :

Handwritten: 03-15-10



Handwritten: 03/18/10

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March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-010

Lab Sample ID: 65950-10 RX
Matrix: Solid
Percent Solid: 99
Dilution Factor: 4790
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/15/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	158000	U
PCB-1221	158000	U
PCB-1232	158000	U
PCB-1242	158000	U
PCB-1248	158000	U
PCB-1254	158000	2600000
PCB-1260	158000	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-10,RX,500X,,A/C

Column ID: 0.25 mm

Data File: M23078.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 4790.6

Column ID: 0.25 mm

Column #1		Column #2			
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#	
PCB 1254	2604400	2513124	3.6		

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

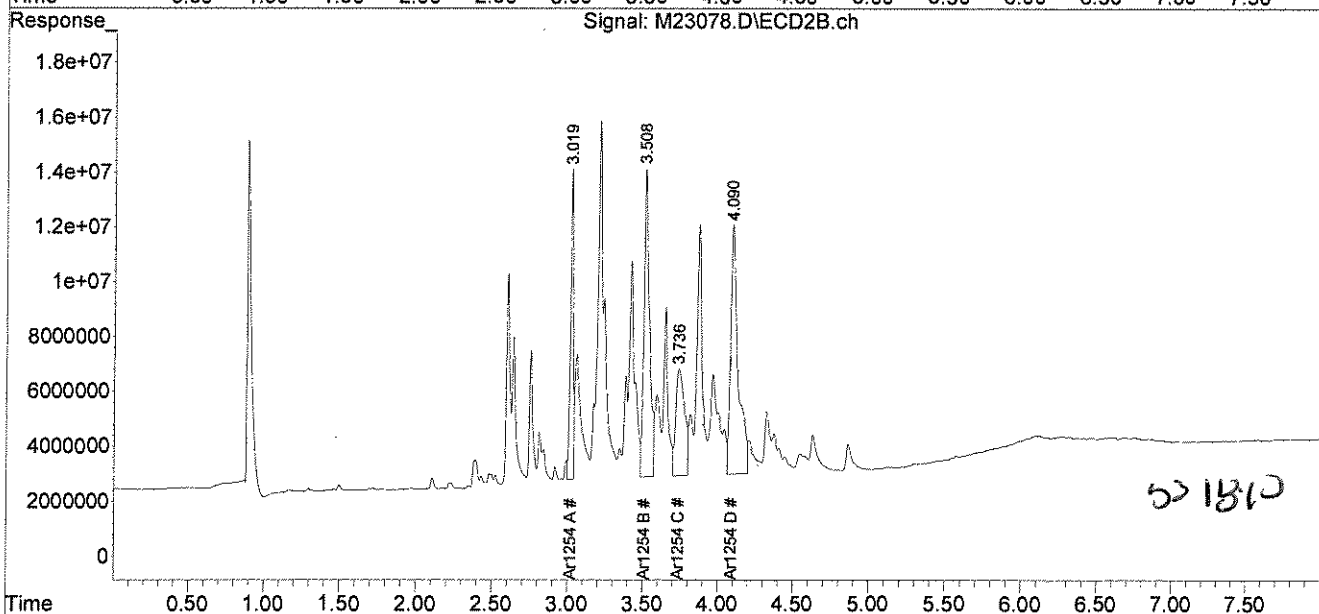
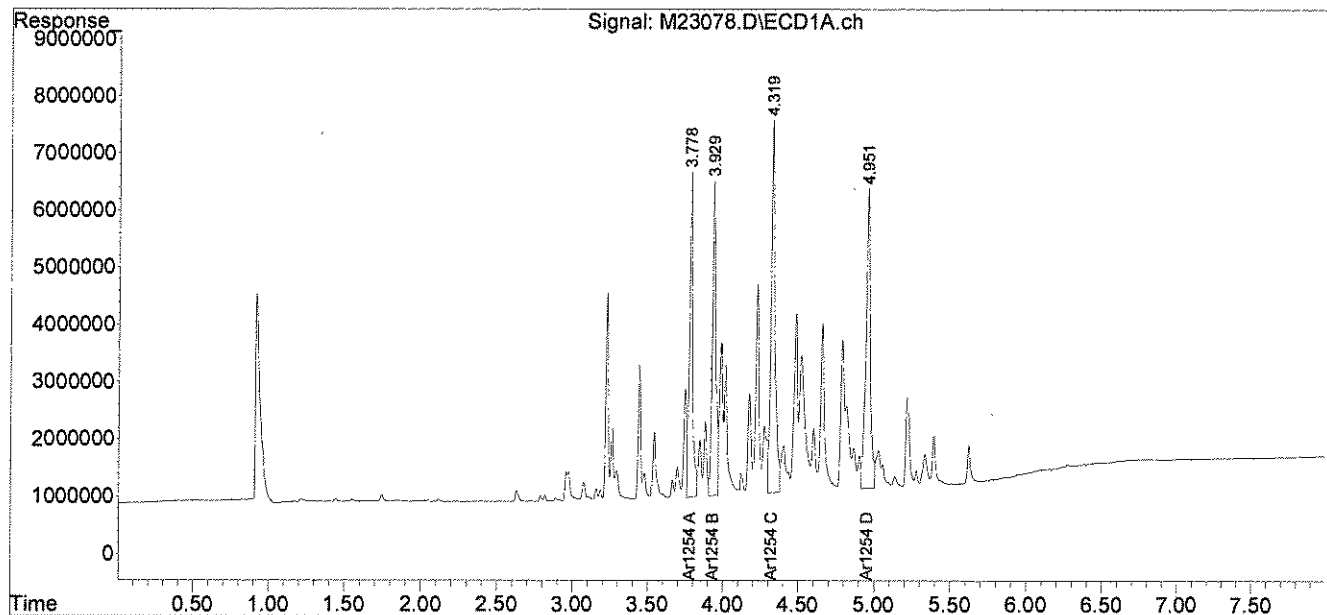
Comments: _____

Data Path : C:\msdchem\1\DATA\031510-M\
Data File : M23078.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 15 Mar 2010 4:10 pm
Operator : JK
Sample : 65950-10,RX,500X,,A/C
Misc : SOIL
ALS Vial : 9 Sample Multiplier: 1

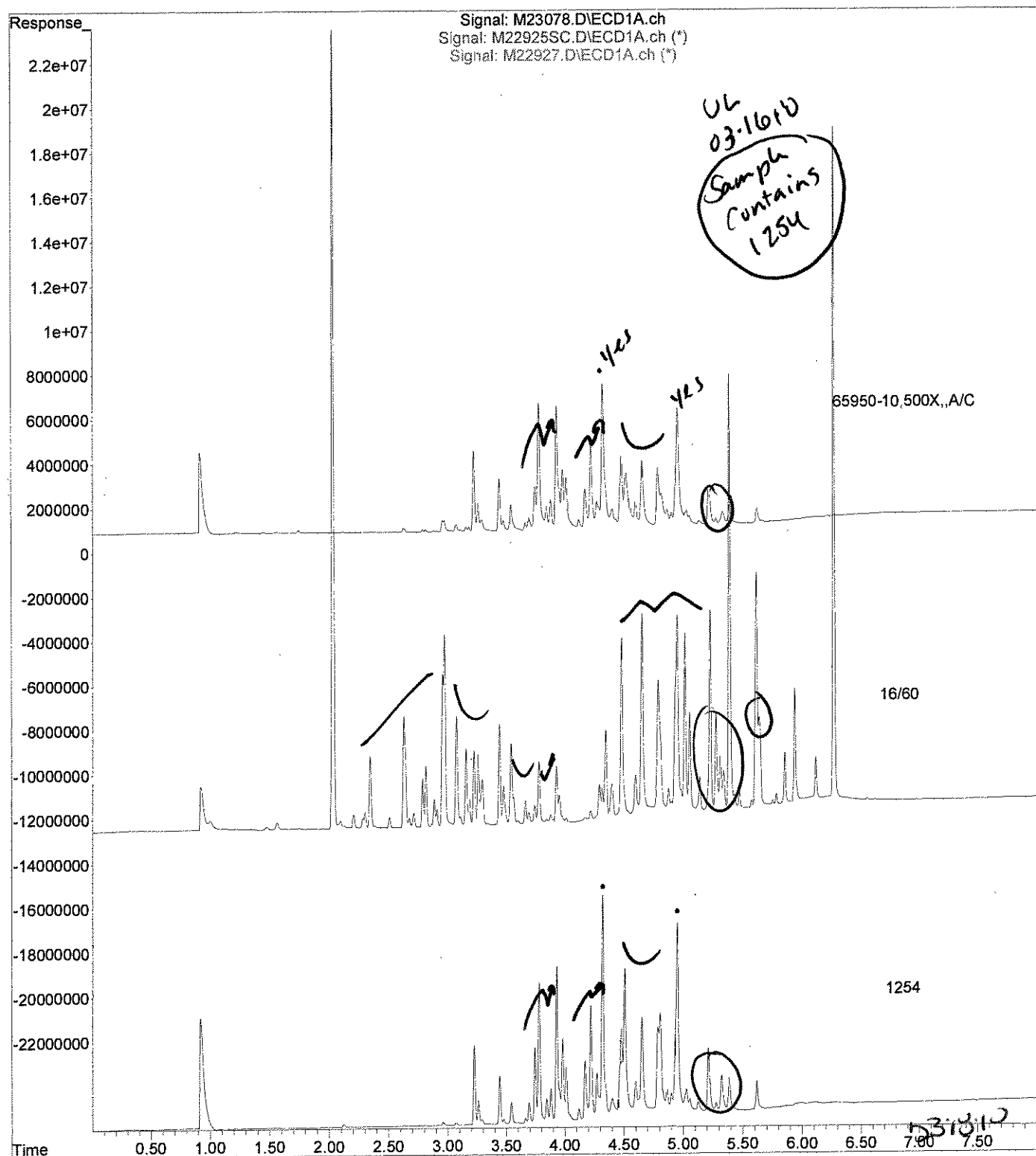
Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Mar 15 16:32:30 2010
Quant Method : C:\msdchem\1\METHODS\54SP020410.M
Quant Title :
QLast Update : Fri Feb 05 08:08:17 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase :
Signal #2 Info :

J
03-16-10



File : C:\msdchem\1\DATA\031510-M\M23078.D
Operator : JK
Acquired : 15 Mar 2010 4:10 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-10,RX,500X,,A/C
Misc Info : SOIL
Vial Number: 9



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

March 16, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-011

Lab Sample ID: 65950-11 RX RR
Matrix: Solid
Percent Solid: 100
Dilution Factor: 9
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	300	U
PCB-1221	300	U
PCB-1232	300	U
PCB-1242	300	U
PCB-1248	300	U
PCB-1254	300	630
PCB-1260	300	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	79	%
Decachlorobiphenyl	90	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-11,RX,RR,,A/C

Column ID: 0.25 mm

Data File: M23053.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 9.2

Column ID: 0.25 mm

COMPOUND	Column #1	Column #2	RPD		#
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1254	630	513	20.4		

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

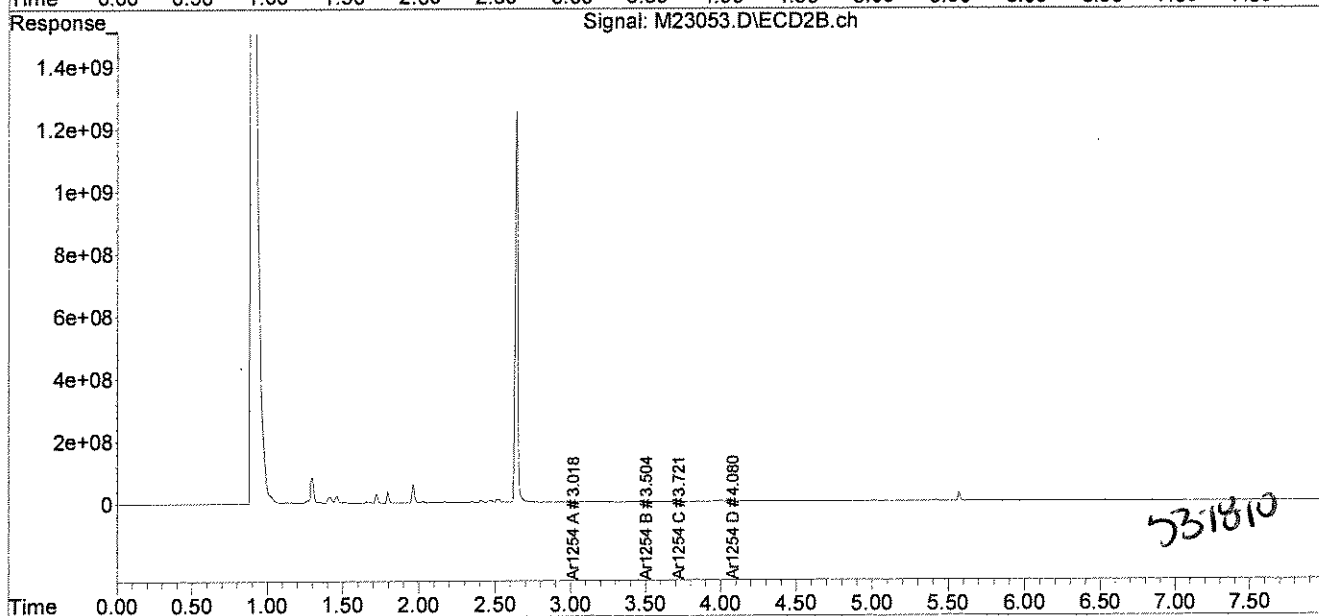
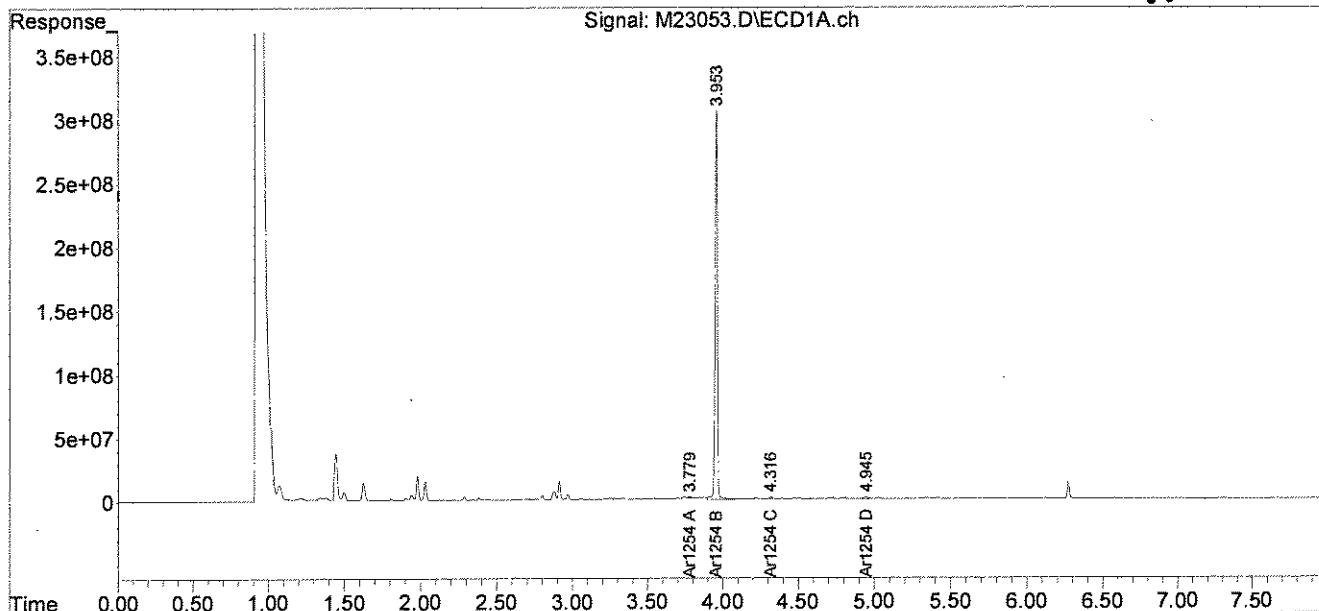
Comments: _____

Data Path : C:\msdchem\1\DATA\031210-M\
Data File : M23053.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Mar 2010 5:32 pm
Operator : JK
Sample : 65950-11,RX,RR,,A/C
Misc : SOIL
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Mar 15 09:22:17 2010
Quant Method : C:\msdchem\1\METHODS\54SP020410.M
Quant Title :
QLast Update : Fri Feb 05 08:08:17 2010
Response via : Initial Calibration
Integrator: ChemStation

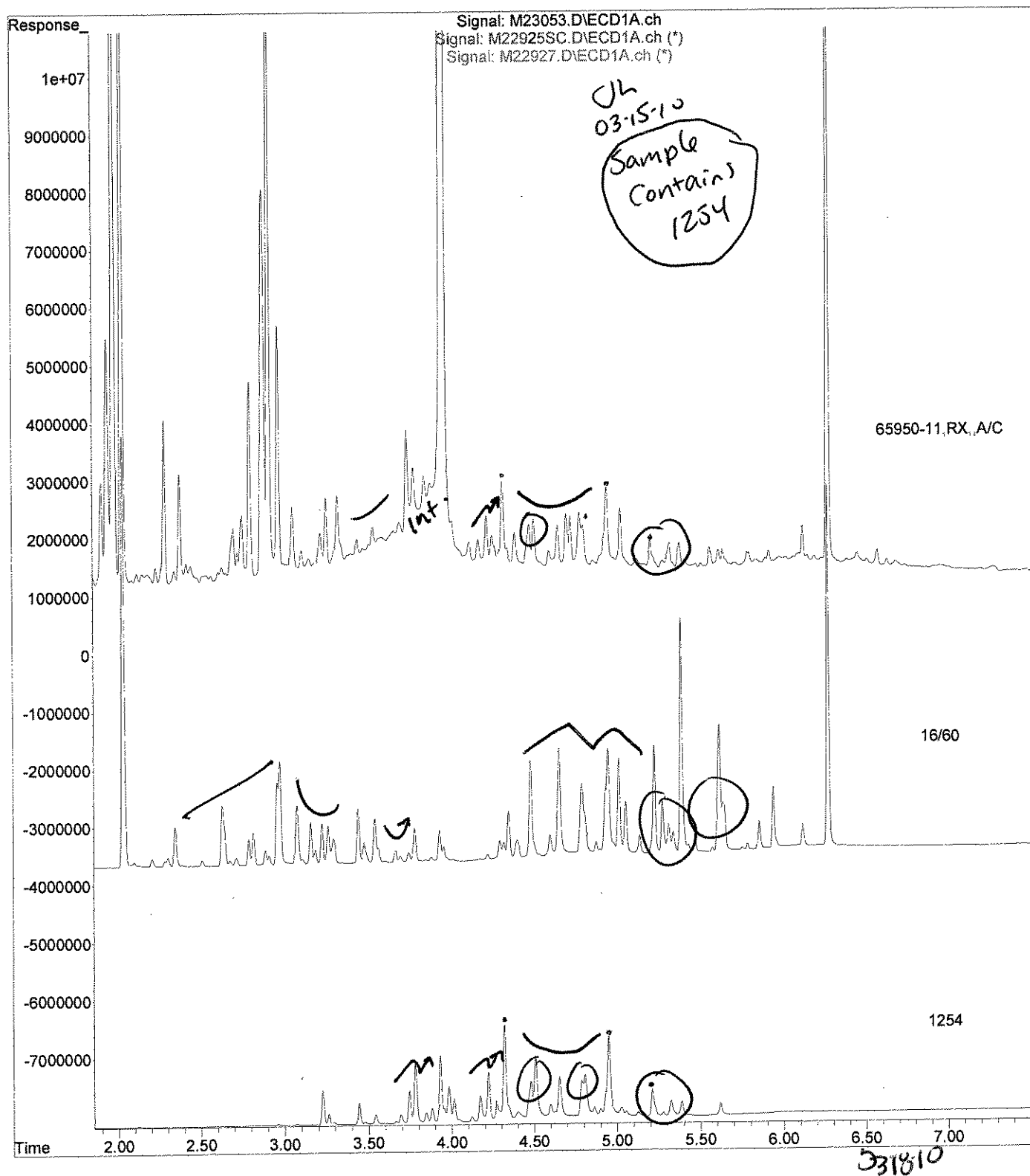
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

JK
03-15-10



531810

File : C:\msdchem\1\DATA\031210-M\M23053.D
Operator : JK
Acquired : 12 Mar 2010 5:32 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-11,RX,RR,,A/C
Misc Info : SOIL
Vial Number: 9



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

March 18, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBK-012

Lab Sample ID: 65950-12 RX
Matrix: Solid
Percent Solid: 99
Dilution Factor: 18
Collection Date: 02/25/10
Lab Receipt Date: 02/26/10
Extraction Date: 03/02/10
Analysis Date: 03/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	590	U
PCB-1221	590	U
PCB-1232	590	U
PCB-1242	590	U
PCB-1248	590	U
PCB-1254	590	13000
PCB-1260	590	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	98	%
Decachlorobiphenyl	82	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 65950

GC Column #1: STX-CLPesticides I

Sample: 65950-12,RX,2X,,A/C

Column ID: 0.25 mm

Data File: M23063.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 18.1

Column ID: 0.25 mm

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	12982	9676	29.2

Column to be used to flag RPD values greater than QC limit of 40%

* Values outside QC limits

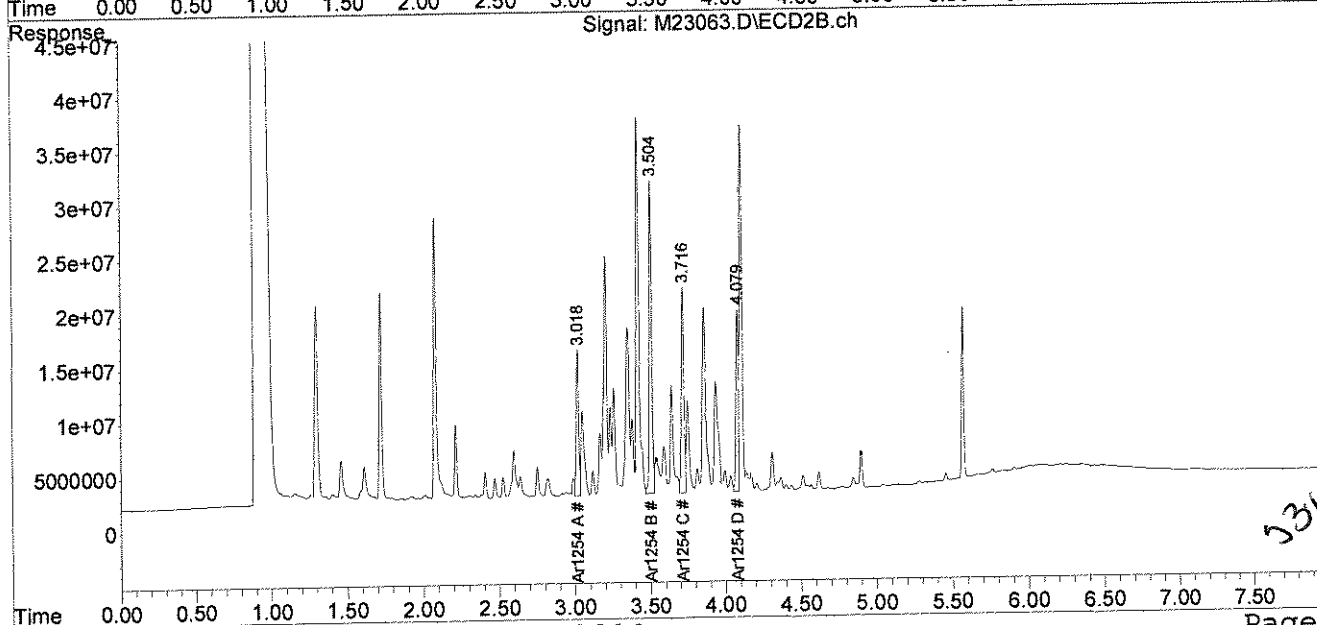
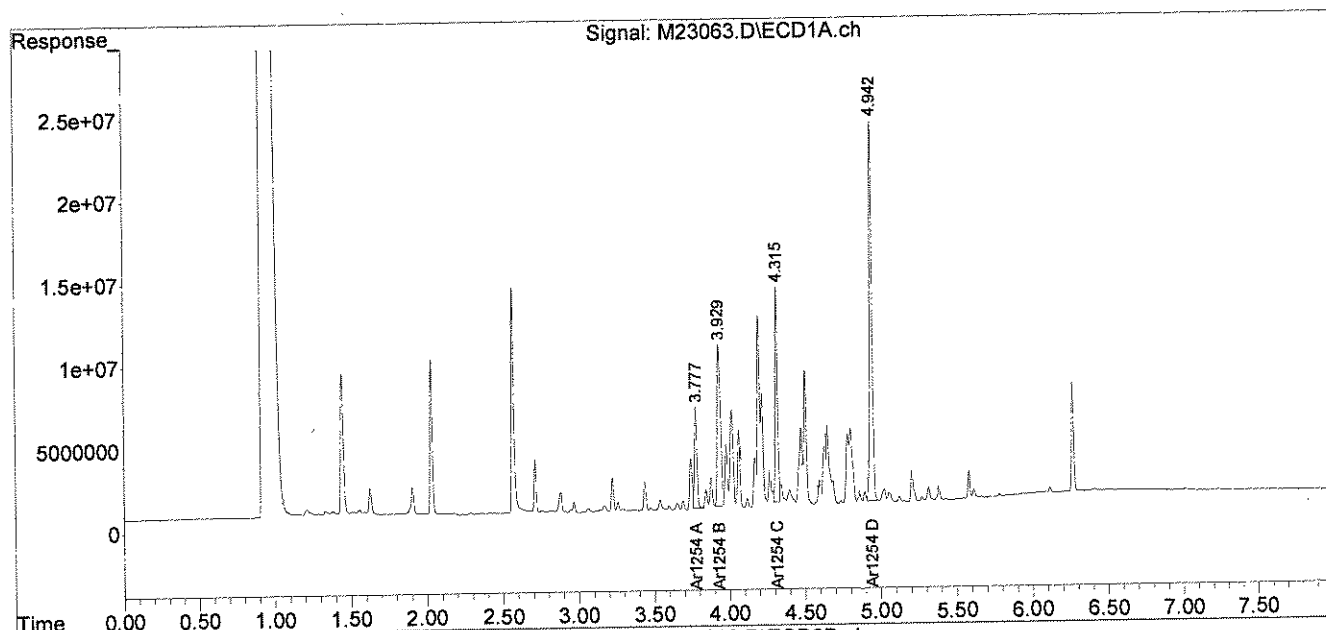
Comments: _____

Data Path : C:\msdchem\1\DATA\031210-M\
Data File : M23063.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Mar 2010 7:13 pm
Operator : JK
Sample : 65950-12,RX,2X,,A/C
Misc : SOIL
ALS Vial : 19 Sample Multiplier: 1

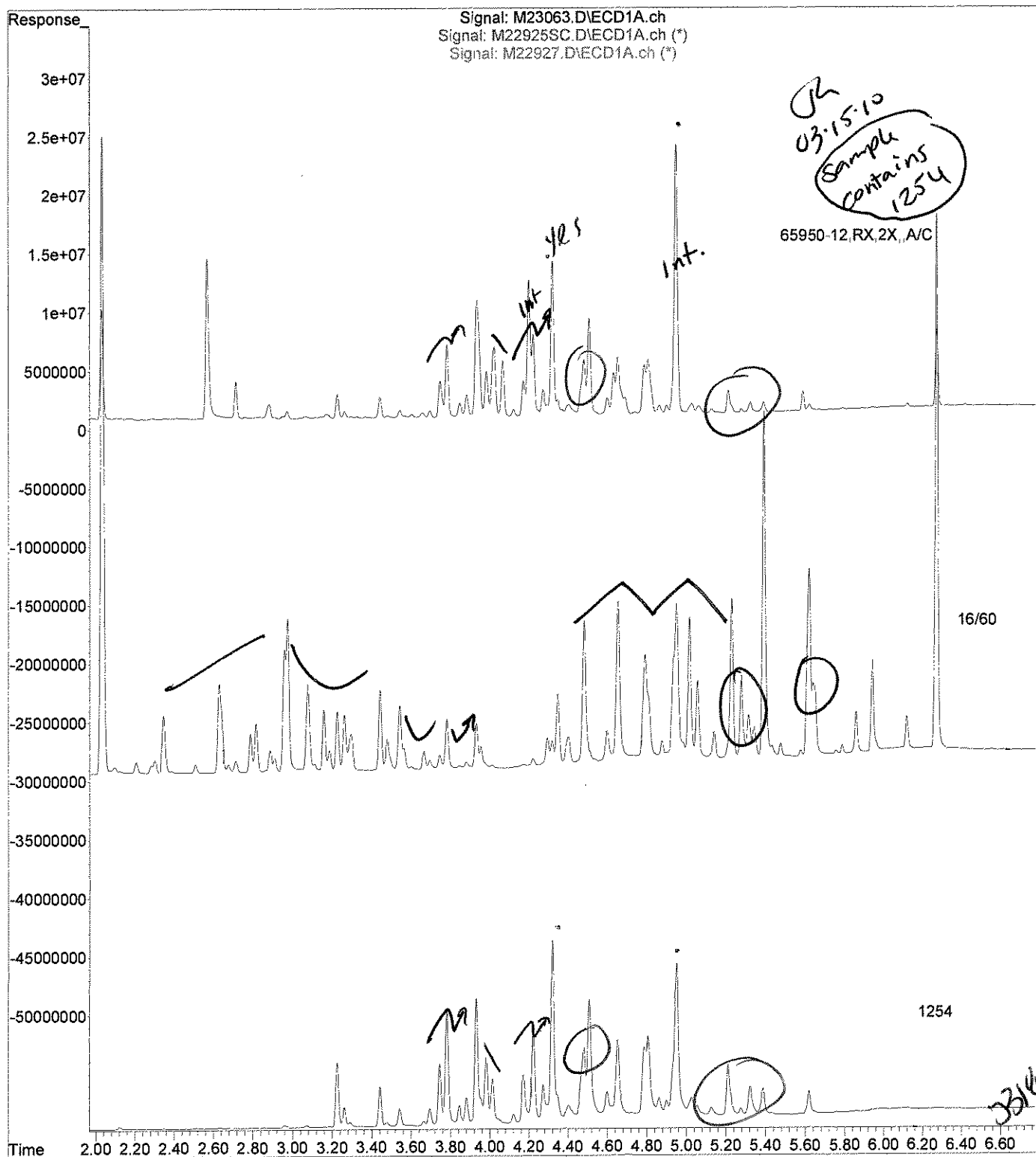
Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Mar 15 10:45:34 2010
Quant Method : C:\msdchem\1\METHODS\54SP020410.M
Quant Title :
QLast Update : Fri Feb 05 08:08:17 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase :
Signal #2 Info :

JK
03-15-10



File : C:\msdchem\1\DATA\031210-M\M23063.D
Operator : JK
Acquired : 12 Mar 2010 7:13 pm using AcqMethod PCB.M
Instrument : Instrument M
Sample Name: 65950-12,RX,2X,,A/C
Misc Info : SOIL
Vial Number: 19



PCB
QC FORMS

Instrument ID: M
GC Column #1: STX-CLPesticides I
Column ID: 0.25 mm
GC Column #2: STX-CLPesticides II
Column ID: 0.25 mm

[illegible]

Column to be used to flag recovery values outside of QC limits
* Values outside QC limits
D System Monitoring Compound diluted out

PCB SOIL
LABORATORY CONTROL SAMPLE/DUPLICATE
PERCENT RECOVERY

Instrument ID: M

GC Column #1: STX-CLPesticides I

Column ID: 0.25 mm

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

SDG: 65950

Non-spiked sample: B030210PSOX,RR,,A/C

Spike: L030210PSOX,RR,,A/C

Spike duplicate: LD030210PSOX,RR,,A/C

COMPOUND	LCS SPIKE	LCSD SPIKE	LOWER	UPPER	RPD	NON-SPIKE	SPIKE	SPIKE	#	SPIKE DUP	SPIKE DUP	#	RPD	#
	ADDED (ug/kg)	ADDED (ug/kg)	LIMIT	LIMIT	LIMIT	RESULT (ug/kg)	RESULT (ug/kg)	% REC		RESULT (ug/kg)	% REC			
PCB 1016	200	200	65	140	30	0	235	117		183	92		24.6	
PCB 1260	200	200	60	130	30	0	229	115		188	94		19.7	
PCB 1016 #2	200	200	65	140	30	0	340	170	*	254	127		29.1	
PCB 1260 #2	200	200	60	130	30	0	249	124		258	129		3.6	

Column to be used to flag recovery and RPD values outside of QC limits

* Values outside QC limits

LCS/LCSD spike added values have been weight adjusted.

Non-spike result of "0" used in place of "U" to allow calculation of spike recovery.

Comments: _____

CHAIN OF CUSTODIES

Chain Of Custody Form

Analytics environmental laboratory LLC 195 Commerce Way Suite E Portsmouth, NH 03801 Phone (603) 436-5111 Fax (603) 430-2151		For Analytics Use Only Rev. 5/06/18/08 Samples were: 1) Shipped of hand-delivered 2) Temp blank °C <u>2.5</u> 3) Received in good condition <u>Y</u> or <u>N</u> 4) pH checked by: <u>N/A</u> 5) Labels checked by: <u>CP 2/26/10</u>	
Project#: <u>22822</u> Proj. Name: <u>UMaine-Stewart Commons</u> Company: <u>Woodard & Curran</u> Contact: <u>Amy Wallace</u> Address: <u>35 New England Business Center Suite 180</u> <u>Andover, MA 01810</u> Phone: <u>(978)557-8150</u> PO# <u>Quote #</u>		Matrix Key: C = Concrete WP = Wipe WW = Wastewater SW = Surface Water GW = Groundwater DW = Drinking Water S = Soil/Sludge O = Oil E = Extract	
Station Identification <u>IMSC-CBK-001</u> <u>IMSC-CBK-002</u> <u>IMSC-CBK-003</u> <u>IMSC-CBK-004</u> <u>IMSC-CBK-005</u> <u>IMSC-CBK-006</u> <u>IMSC-CBK-007</u> <u>IMSC-CBK-008</u> <u>IMSC-CBK-009</u> <u>IMSC-CBK-010</u> <u>IMSC-CBK-011</u>		Sample Date <u>2/25/10</u> <u>12:14</u> <u>12:18</u> <u>12:28</u> <u>12:31</u> <u>12:33</u> <u>12:37</u> <u>12:42</u> <u>12:45</u> <u>12:50</u> <u>12:53</u> <u>12:56</u>	
Sample Time <u>12:14</u> <u>12:18</u> <u>12:28</u> <u>12:31</u> <u>12:33</u> <u>12:37</u> <u>12:42</u> <u>12:45</u> <u>12:50</u> <u>12:53</u> <u>12:56</u>		Analysis <u>PCB</u> <u>PCB</u> <u>PCB</u> <u>PCB</u> <u>PCB</u> <u>PCB</u> <u>PCB</u> <u>PCB</u> <u>PCB</u> <u>PCB</u> <u>PCB</u>	
Station Identification <u>IMSC-CBK-001</u> <u>IMSC-CBK-002</u> <u>IMSC-CBK-003</u> <u>IMSC-CBK-004</u> <u>IMSC-CBK-005</u> <u>IMSC-CBK-006</u> <u>IMSC-CBK-007</u> <u>IMSC-CBK-008</u> <u>IMSC-CBK-009</u> <u>IMSC-CBK-010</u> <u>IMSC-CBK-011</u>		Matrix <u>Caulk</u> <u>1</u> <u>6</u> <u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> <u>8</u> <u>9</u> <u>10</u> <u>11</u>	
Container Key P=plastic G=glass <u>1</u> <u>6</u> <u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> <u>8</u> <u>9</u> <u>10</u> <u>11</u>		pH <u>6.5</u> <u>9.5</u> <u>10</u> <u>11</u> <u>12</u> <u>13</u> <u>14</u> <u>15</u> <u>16</u> <u>17</u> <u>18</u> <u>19</u> <u>20</u>	
Station Identification <u>IMSC-CBK-001</u> <u>IMSC-CBK-002</u> <u>IMSC-CBK-003</u> <u>IMSC-CBK-004</u> <u>IMSC-CBK-005</u> <u>IMSC-CBK-006</u> <u>IMSC-CBK-007</u> <u>IMSC-CBK-008</u> <u>IMSC-CBK-009</u> <u>IMSC-CBK-010</u> <u>IMSC-CBK-011</u>		Date <u>2/25/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u>	
Date <u>2/25/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u> <u>2/26/10</u>		Time <u>18:45</u> <u>9:35</u> <u>9:35</u> <u>9:35</u> <u>9:35</u> <u>9:35</u> <u>9:35</u> <u>9:35</u> <u>9:35</u> <u>9:35</u> <u>9:35</u> <u>9:35</u>	
Relinquished By: <u>Amy Wallace</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u>		Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u> Relinquished By: <u>CP 2/26/10</u>	
Email Results to: <u>awallace@woodardcurran.com</u> <u>jwallace@woodardcurran.com</u>		Project Requirements: *Fee may apply Report Type: <input type="checkbox"/> MCP* <input checked="" type="checkbox"/> Level II* <input type="checkbox"/> Level III* <input type="checkbox"/> Level IV* <input type="checkbox"/> Standard <input type="checkbox"/> CT/CP* <input type="checkbox"/> DOD* <input type="checkbox"/> Other: State: <input type="checkbox"/> NH <input type="checkbox"/> MA <input checked="" type="checkbox"/> ME <input type="checkbox"/> CT <input type="checkbox"/> RI State Standard: (eg. S-1 or GW-1) EDD Required: Y* <u>N</u> Type: <u>PDF</u>	
Turnaround Time (TAT) <input type="checkbox"/> 24hr* <input type="checkbox"/> 48hr* <input type="checkbox"/> 5 Days* <input type="checkbox"/> 72hr* <input checked="" type="checkbox"/> 10 Days *Fee may apply; lab approval required		Comments / Instructions: <u>Saxhlet/8082</u>	

environmental laboratory LLC		195 Commerce Way Suite E Portsmouth, NH 03801 Phone (603) 436-5111 Fax (603) 430-2151		For Analytics Use Only Rev. 4/03/28/08													
Project#: <u>222822</u> Proj. Name: <u>U Maine</u> Company: <u>Woodard + Curran</u> Contact: <u>Amy Wallace</u> Address: <u>35 New England Business Center, Suite 180</u> <u>Andover MA 01810</u> Phone: <u>978-557-8150</u> PO#: _____ Sampler (Signature): <u>Amy Wallace</u> Quote # _____		Matrix Key: C = Concrete WP = Wipe WW = Wastewater SW = Surface Water GW = Groundwater DW = Drinking Water S = Soil/Sludge O = Oil E = Extract		Samples were: 1) Shipped or hand-delivered 2) Temp blank °C <u>2.5°</u> 3) Received in good condition <u>Y</u> or <u>N</u> 4) pH checked by: <u>N/A</u> 5) Labels checked by: <u>CP2/26/10</u>													
Station Identification <u>UMSC-CBK-012</u>		Sample Date <u>2/25/10</u>		Sample Time <u>13:02</u>		Analysis <u>PCG</u>		Preservation Unpres <input checked="" type="checkbox"/> °C <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> HCL <input type="checkbox"/> Methanol <input type="checkbox"/> Other <input type="checkbox"/>		Container Key P=plastic G=glass		Container number/trace <u>1 G</u>		pH <u>6.5950 - 12</u>		Analytics Sample # <u>65950-12</u>	
Email Results to: <u>awall@woodardcurran.com</u> <u>jhamel@woodardcurran.com</u>		Comments / Instructions: <u>Soxhlet / 8082</u>		Project Requirements: *Fee may apply													
				Report Type: <input type="checkbox"/> MCP* <input checked="" type="checkbox"/> Level II* <input type="checkbox"/> Level III* <input type="checkbox"/> Level IV* <input type="checkbox"/> Standard <input type="checkbox"/> CTCP* <input type="checkbox"/> DOD*													
Turnaround Time (TAT) <input type="checkbox"/> 24hr* <input type="checkbox"/> 48hr* <input checked="" type="checkbox"/> 10 Days <input type="checkbox"/> 72hr* <input type="checkbox"/> 5 Days*		State Standard: (eg. S-1 or GW-1) EDD Required: <u>Y</u> * <u>N</u> Type: <u>PDF</u>		Relinquished By Sampler: <u>Amy Wallace</u> Date: <u>2/25/10</u> Time: <u>18:45</u> Relinquished By: <u>CP2</u> Date: <u>2/26/10</u> Time: <u>09:35</u> Received By: <u>CP2</u> Date: _____ Time: _____ Relinquished By: _____ Date: _____ Time: _____													

ANALYTICS SAMPLE RECEIPT CHECKLIST

AEL LAB#: 65950
 CLIENT: Woodard & Curran
 PROJECT: UMaine-Stewart Commons

COOLER NUMBER: N/A
 NUMBER OF COOLERS: 1
 DATE RECEIVED: 2/26/10

A: PRELIMINARY EXAMINATION:

DATE COOLER OPENED: 2/26/10
 Date Received: 2/26/10

1. Cooler received by (initials)

2. Circle one:

Hand delivered
 (If so, skip 3)

Shipped

3. Did cooler come with a shipping slip?

Y

N/A

3a. Enter carrier name and airbill number here:

4. Were custody seals on the outside of cooler?

Y

N/A

How many & where:

Seal Date:

Seal Name:

5. Did the custody seals arrive unbroken and intact upon arrival?

Y

N/A

6. COC#:

7. Were Custody papers filled out properly (ink, signed, etc)?

Y

N

8. Were custody papers sealed in a plastic bag?

Y

N

9. Did you sign the COC in the appropriate place?

Y

N

10. Was the project identifiable from the COC papers?

Y

N

11. Was enough ice used to chill the cooler?

Y N

Temp. of cooler:

2.5°

B. Log-In: Date samples were logged in:

2/26/10

By:

CG

12. Type of packing in cooler (bubble wrap, popcorn)

Y

N

13. Were all bottles sealed in separate plastic bags?

Y

N

14. Did all bottles arrive unbroken and were labels in good condition?

Y

N

15. Were all bottle labels complete (ID, Date, time, etc.)

Y

N

16. Did all bottle labels agree with custody papers?

Y

N

17. Were the correct containers used for the tests indicated?

Y

N

18. Were samples received at the correct pH?

cg

N/A

19. Was sufficient amount of sample sent for the tests indicated?

Y 2/26/10

N

20. Were bubbles absent in VOA samples?

Y

N/A

If NO, List sample #'s:

21. Laboratory labeling verified by (initials):

Date: CG 2/26/10

February 18, 2011

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

**RE: Analytical Results Case Narrative
Analytics # 69033 Rev 1
UMaine-Stewart Commons No: 222822**

Dear Ms. Wallace;

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082.

Revision 1: This report is revised to correct project name on the narrative from USM Gorham to UMaine-Stewart Commons.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

- Case Narrative/Non-Conformance Summary
- Sample Log Sheet - Cover Page
- PCB Form 1 Data Sheet for Samples and Blanks
- Chromatograms
- PCB Form 10 Confirmation Results
- PCB Form 3 MS/MSD (LCS) Recoveries
- Chain of Custody (COC) Forms

QC NON-CONFORMANCE SUMMARY

Sample Receipt:

No exceptions.

PCBs by EPA Method 8082:

No results were reported below the quantitation limit.

Samples 69033-2 and 69033-3 had low Decachlorobiphenyl surrogate recovery on column#2. Column#1 was in control. Results were reported off of column#1 without qualification.

If you have any questions on these results, please do not hesitate to contact me.

Sincerely,

ANALYTICS Environmental Laboratory, LLC



Stephen L. Knollmeyer
Laboratory Director

Ms. Amy Wallace
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

Report Number: 69033

Revision: Rev. 1

Re: UMaine- Stewart Commons (Project No: 222822)

Enclosed are the results of the analyses on your sample(s). Samples were received on 10 February 2011 and analyzed for the tests listed. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.


<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
69033-1	02/09/11	UMSC-CBC-034	EPA 8082 (PCBs only)	
69033-2	02/09/11	UMSC-CBC-036	EPA 8082 (PCBs only)	
69033-3	02/09/11	UMSC-CBC-038	EPA 8082 (PCBs only)	
69033-4	02/09/11	UMSC-CBC-040	EPA 8082 (PCBs only)	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, Virginia, Maryland, and is accredited by the Department of Defense (DOD) ELAP program. A list of actual certified parameters is available upon request.

If you have any questions on these results, please do not hesitate to contact us

Authorized signature


Stephen L. Knollmeyer Lab. Director

Date

02/10/2011

**This report shall not be reproduced, except in full, without the written
consent of Analytics Environmental Laboratory, LLC.**

Surrogate Compound Limits

Matrix:	Aqueous	Solid	
Units:	% Recovery	% Recovery	Method
Volatile Organic Compounds - Drinking Water			
1,4-Difluorobenzene	70-130		EPA 524.2
Bromofluorobenzene	70-130		
1,2-Dichlorobenzene-d4	70-130		
Volatile Organic Compounds			
1,2-Dichloroethane-d4	70-120	70-120	EPA 624/8260B
Toluene-d8	85-120	85-120	
Bromofluorobenzene	75-120	75-120	
Semi-Volatile Organic Compounds			
2-Fluorophenol	20-110	35-105	EPA 625/8270C
d5-Phenol	15-110	40-100	
d5-nitrobenzene	40-110	35-100	
2-Fluorobiphenyl	50-110	45-105	
2,4,6-Tribromophenol	40-110	40-125	
d14-p-terphenyl	50-130	30-125	
PAH's by SIM			
d5-nitrobenzene	21-110	35-110	EPA 8270C
2-Fluorobiphenyl	36-121	45-105	
d14-p-terphenyl	33-141	30-125	
Pesticides and PCBs			
2,4,5,6-Tetrachloro-m-xylene (TCX)	46-122	40-130	EPA 608/8082
Decachlorobiphenyl (DCB)	40-135	40-130	
Herbicides			
Dichloroacetic acid (DCAA)	30-150	30-150	
Gasoline Range Organics/TPH Gasoline			
Trifluorotoluene TFT (FID)	60-140	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)	60-140	60-140	
Trifluorotoluene TFT (PID)	60-140	60-140	
Bromofluorobenzene (BFB) (PID)	60-140	60-140	
Diesel Range Organics/TPH Diesel			
m-terphenyl	60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH
Volatile Petroleum Hydrocarbons			
2,5-Dibromotoluene (PID)	70-130	70-130	MADEP VPH May 2004 Rev1.1
2,5-Dibromotoluene (FID)	70-130	70-130	
Extracatable Petroleum Hydrocarbons			
1-chloro-octadecane (aliphatic)	40-140	40-140	MADEP EPH May 2004 Rev1.1
o-Terphenyl (aromatic)	40-140	40-140	
2-Fluorobiphenyl (Fractionation)	40-140	40-140	
2-Bromonaphthalene (fractionation)	40-140	40-140	

PCB DATA SUMMARIES

Ms. Amy Wallace
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

February 17, 2011

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: Lab QC

Lab Sample ID: B021011PSOX RR
Matrix: Soil
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date:
Lab Receipt Date:
Extraction Date: 02/10/11
Analysis Date: 02/15/11

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	U
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	93	%
Decachlorobiphenyl	50	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

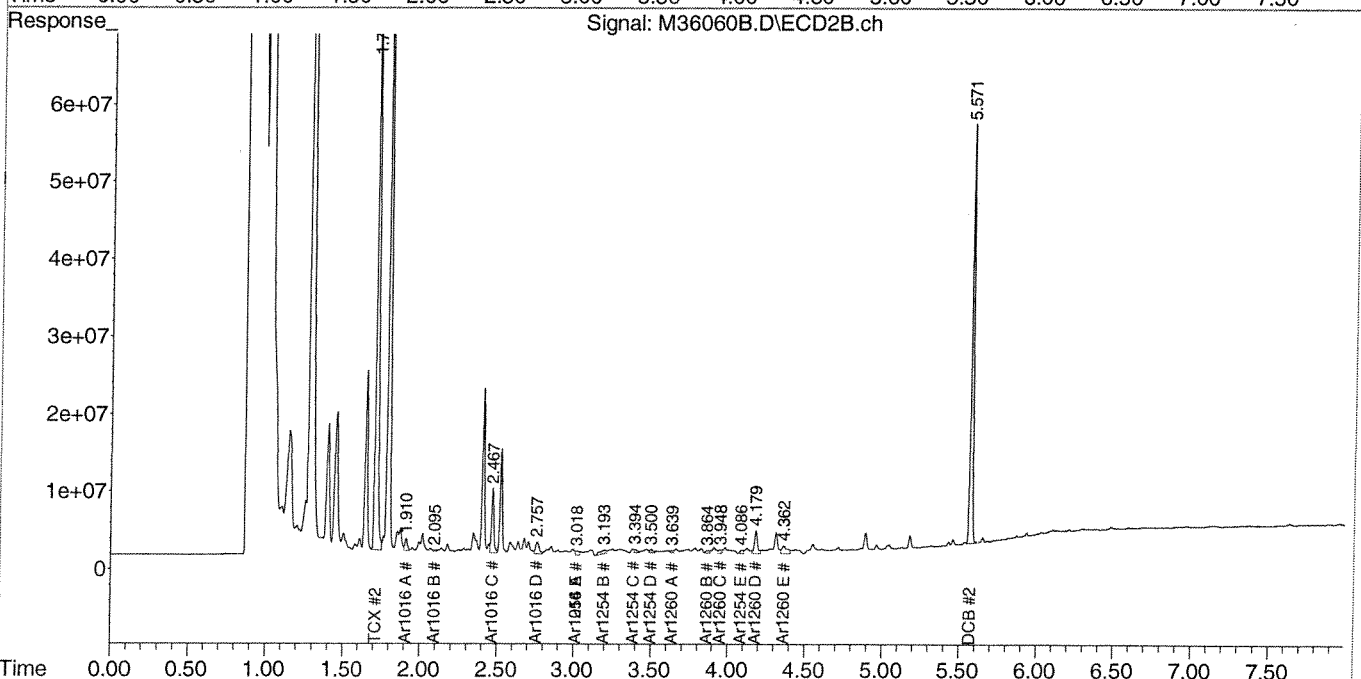
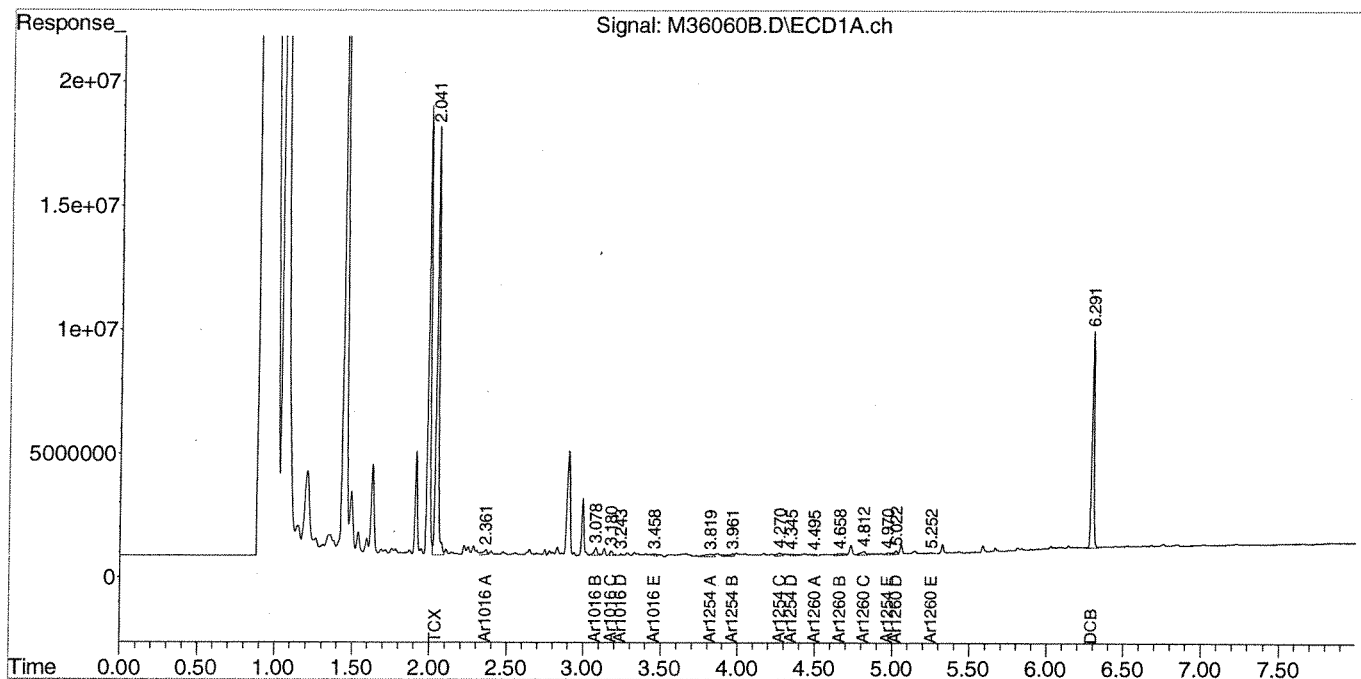
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Data Path : C:\msdchem\1\DATA\021511-M\
Data File : M36060B.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 15 Feb 2011 2:35 pm
Operator : JK
Sample : B021011PSOX,RR,,A/C
Misc : SOIL
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Feb 17 11:30:05 2011
Quant Method : C:\msdchem\1\METHODS\PCB020711.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Mon Feb 07 15:22:15 2011
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



Ms. Amy Wallace
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February 17, 2011

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBC-034

Lab Sample ID: 69033-1
Matrix: Solid
Percent Solid: 99
Dilution Factor: 1.0
Collection Date: 02/09/11
Lab Receipt Date: 02/10/11
Extraction Date: 02/10/11
Analysis Date: 02/15/11

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	784
PCB-1260	33	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	82	%
Decachlorobiphenyl	49	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

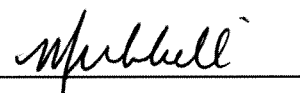
METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB Report

Authorized signature



PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 69033
GC Column #1: STX-CLPesticides I	Sample: 69033-1,,A/C
Column ID: 0.25 mm	Data File: M36061.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 1.0
Column ID: 0.25 mm	

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1254	784	750	4.5	

Column to be used to flag RPD values greater than QC limit of 40%

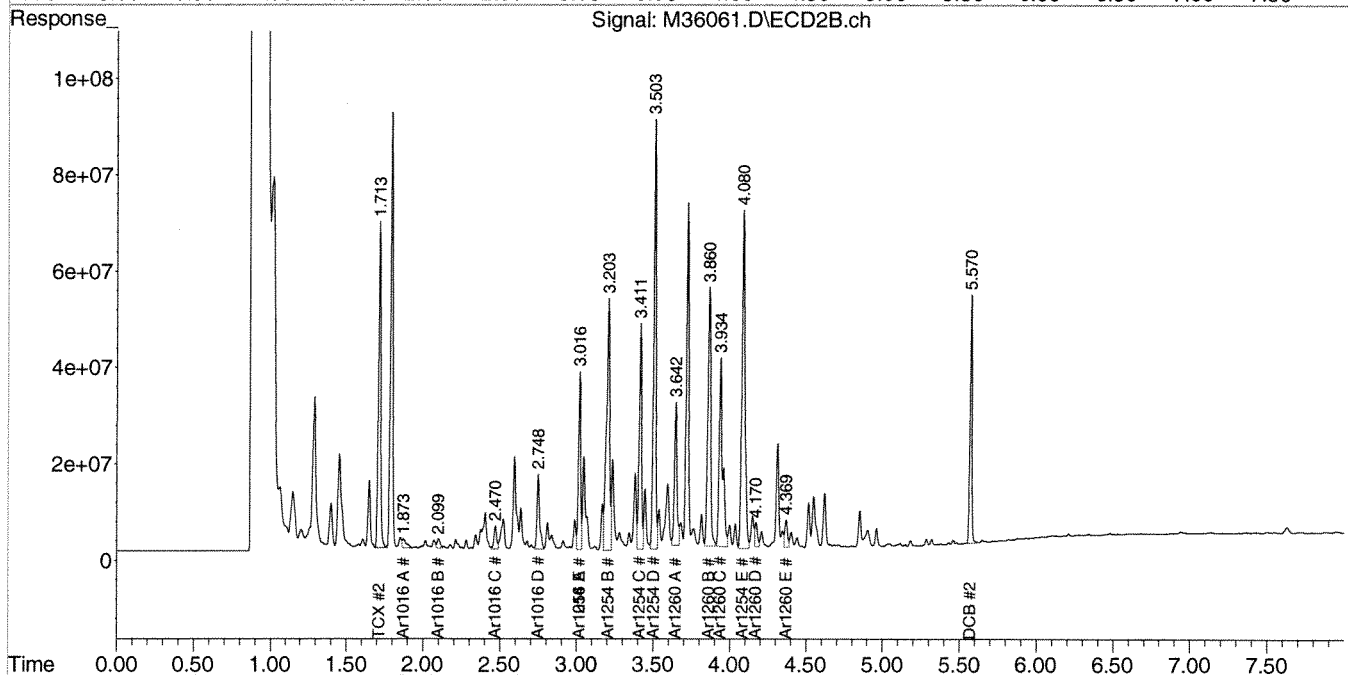
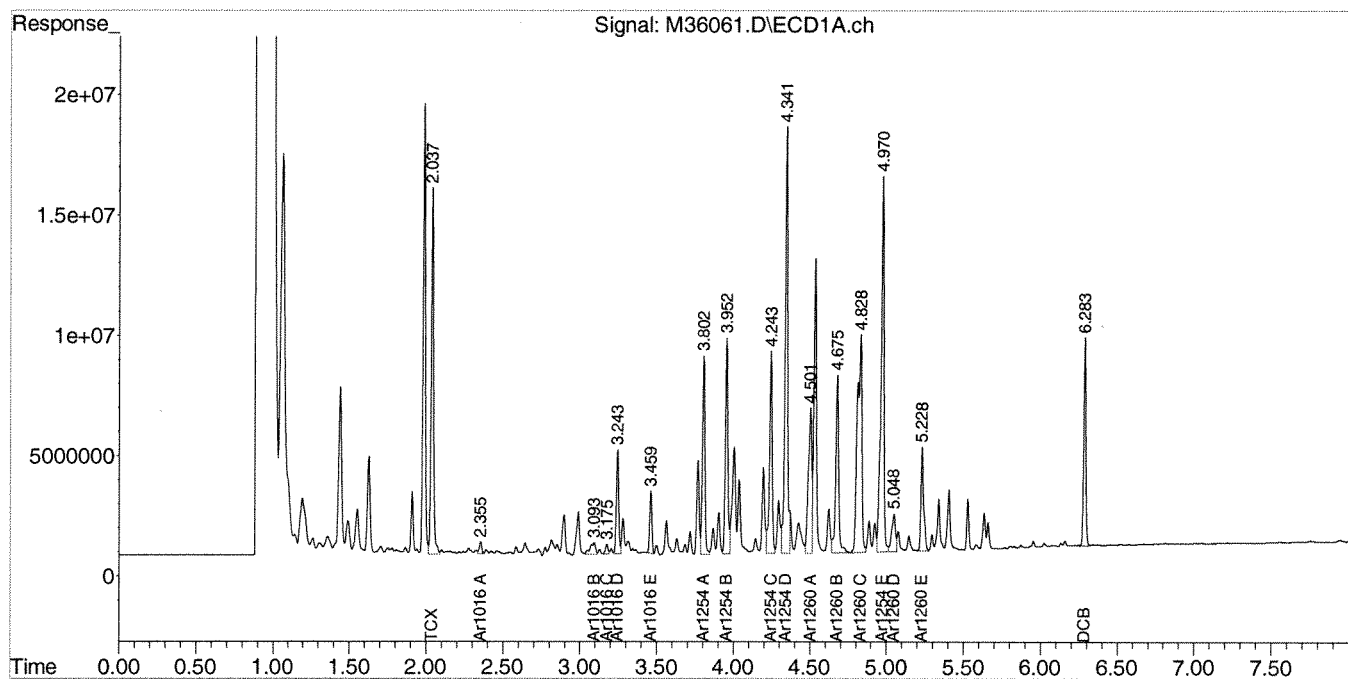
* Values outside QC limits

Comments: _____

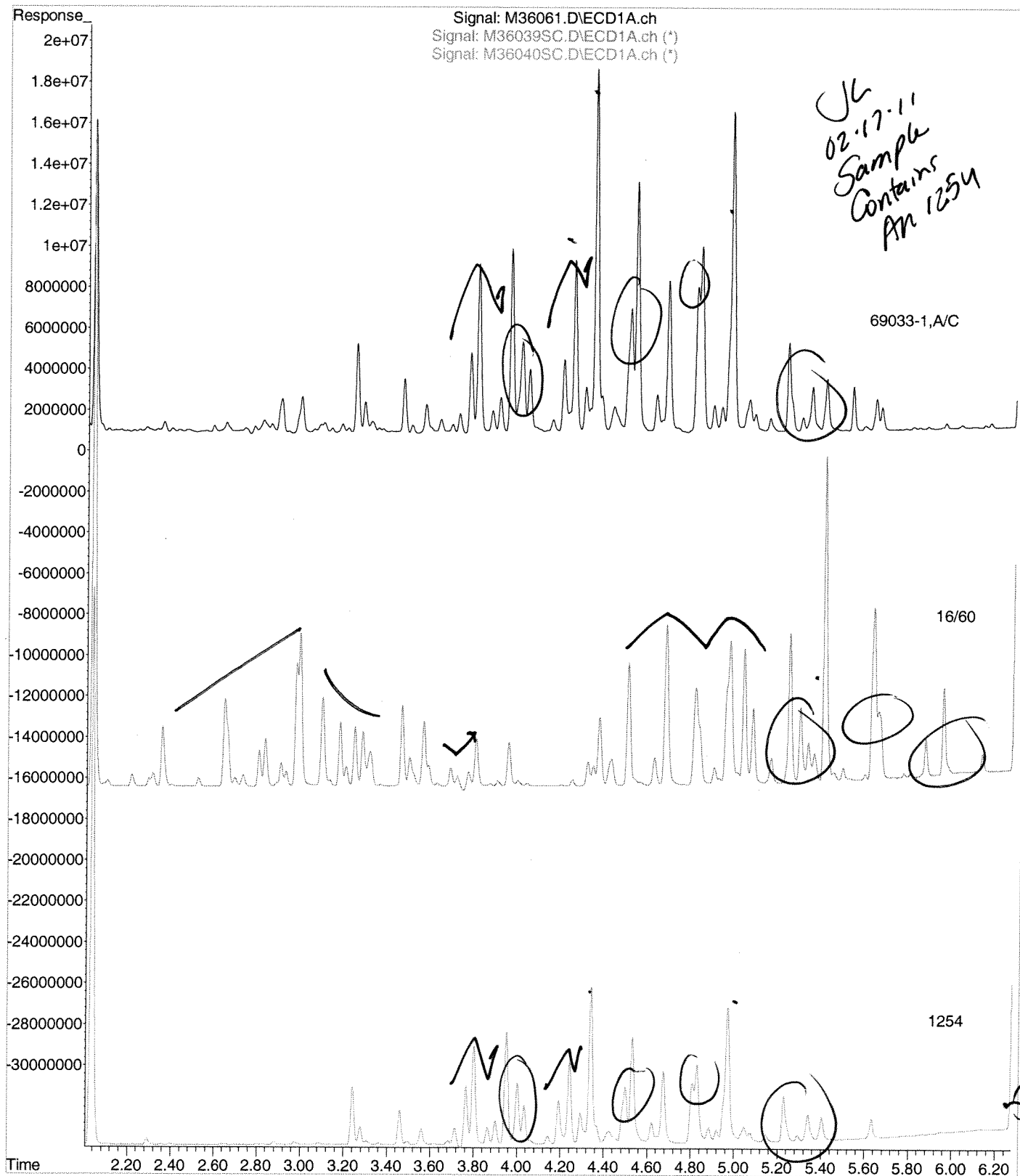
Data Path : C:\msdchem\1\DATA\021511-M\
Data File : M36061.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 15 Feb 2011 2:45 pm
Operator : JK
Sample : 69033-1,,A/C
Misc : SOIL
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Feb 17 11:31:54 2011
Quant Method : C:\msdchem\1\METHODS\PCB020711.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Mon Feb 07 15:22:15 2011
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\021511-M\M36061.D
Operator : JK
Acquired : 15 Feb 2011 2:45 pm using AcqMethod PEST.M
Instrument : Instrument M
Sample Name: 69033-1,,A/C
Misc Info : SOIL
Vial Number: 7



Ms. Amy Wallace
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Portland ME 04102

February 17, 2011

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBC-036

Lab Sample ID: 69033-2
Matrix: Solid
Percent Solid: 97
Dilution Factor: 1.0
Collection Date: 02/09/11
Lab Receipt Date: 02/10/11
Extraction Date: 02/10/11
Analysis Date: 02/15/11

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	277
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	73	%
Decachlorobiphenyl	41	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 69033
GC Column #1: STX-CLPesticides I	Sample: 69033-2,,A/C
Column ID: 0.25 mm	Data File: M36062.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 0.9
Column ID: 0.25 mm	

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1254	276	277	0.1	

Column to be used to flag RPD values greater than QC limit of 40%

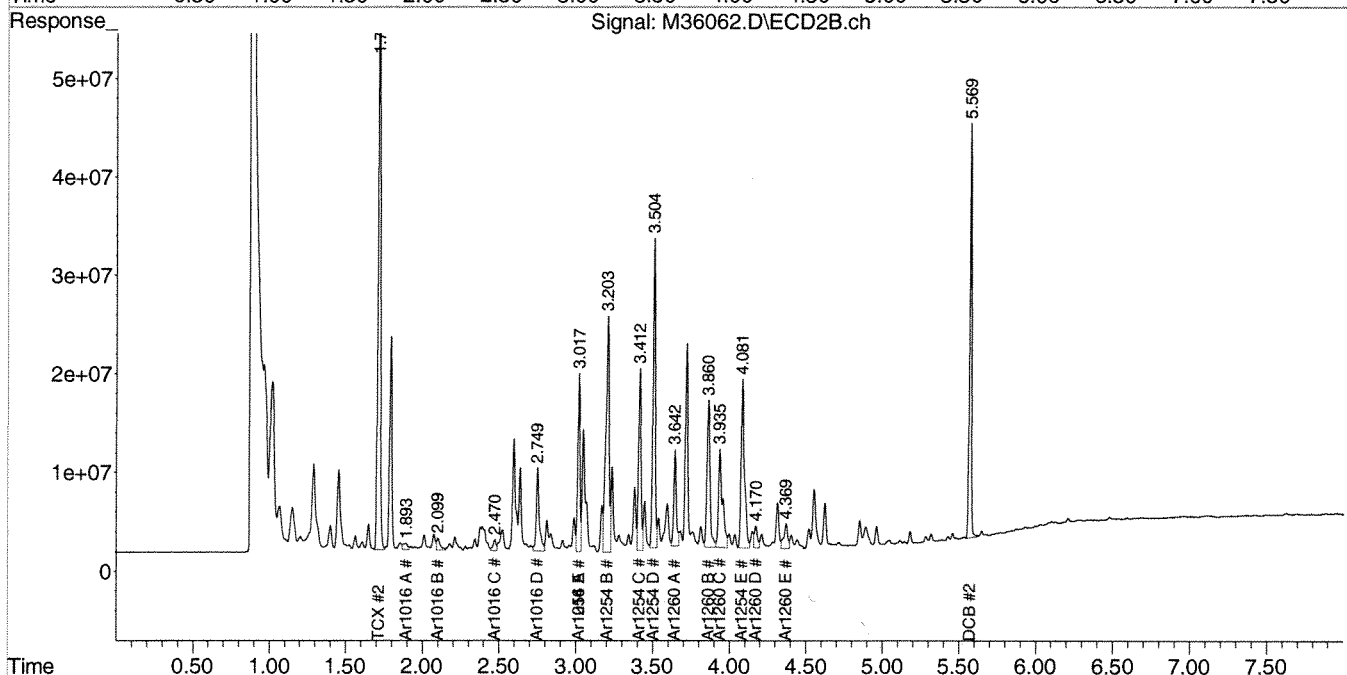
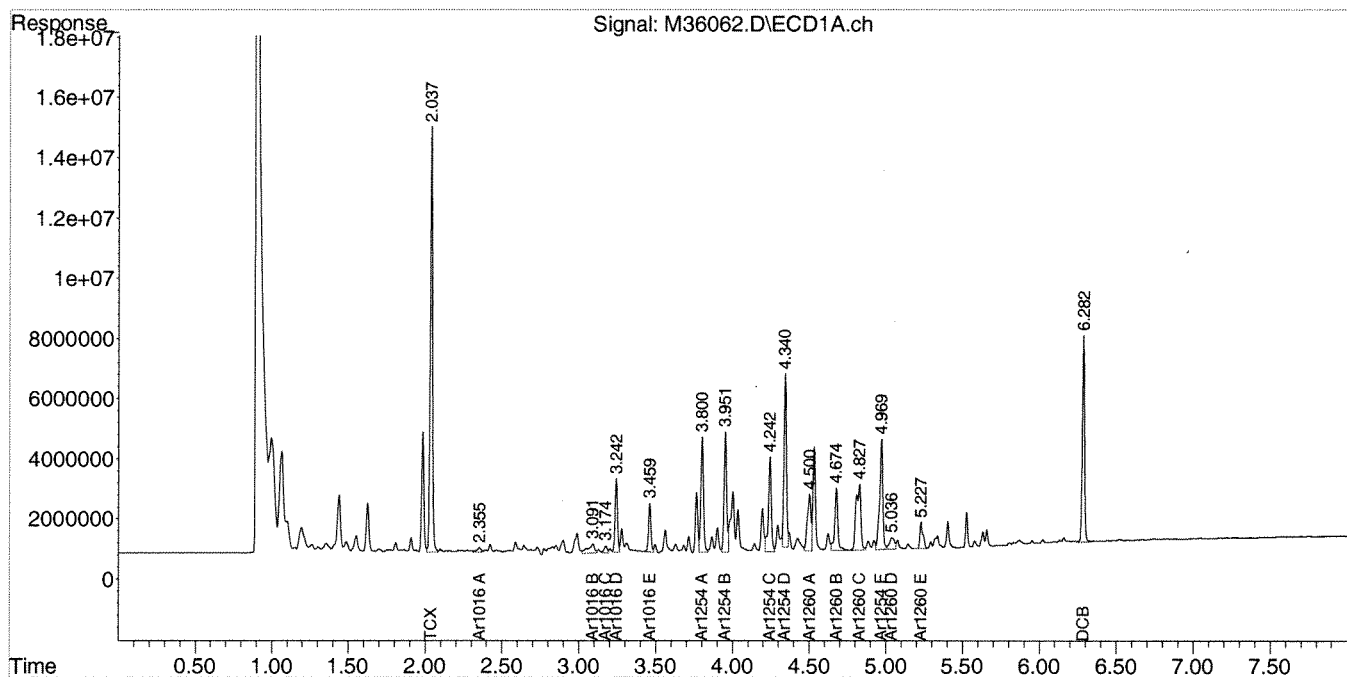
* Values outside QC limits

Comments: _____

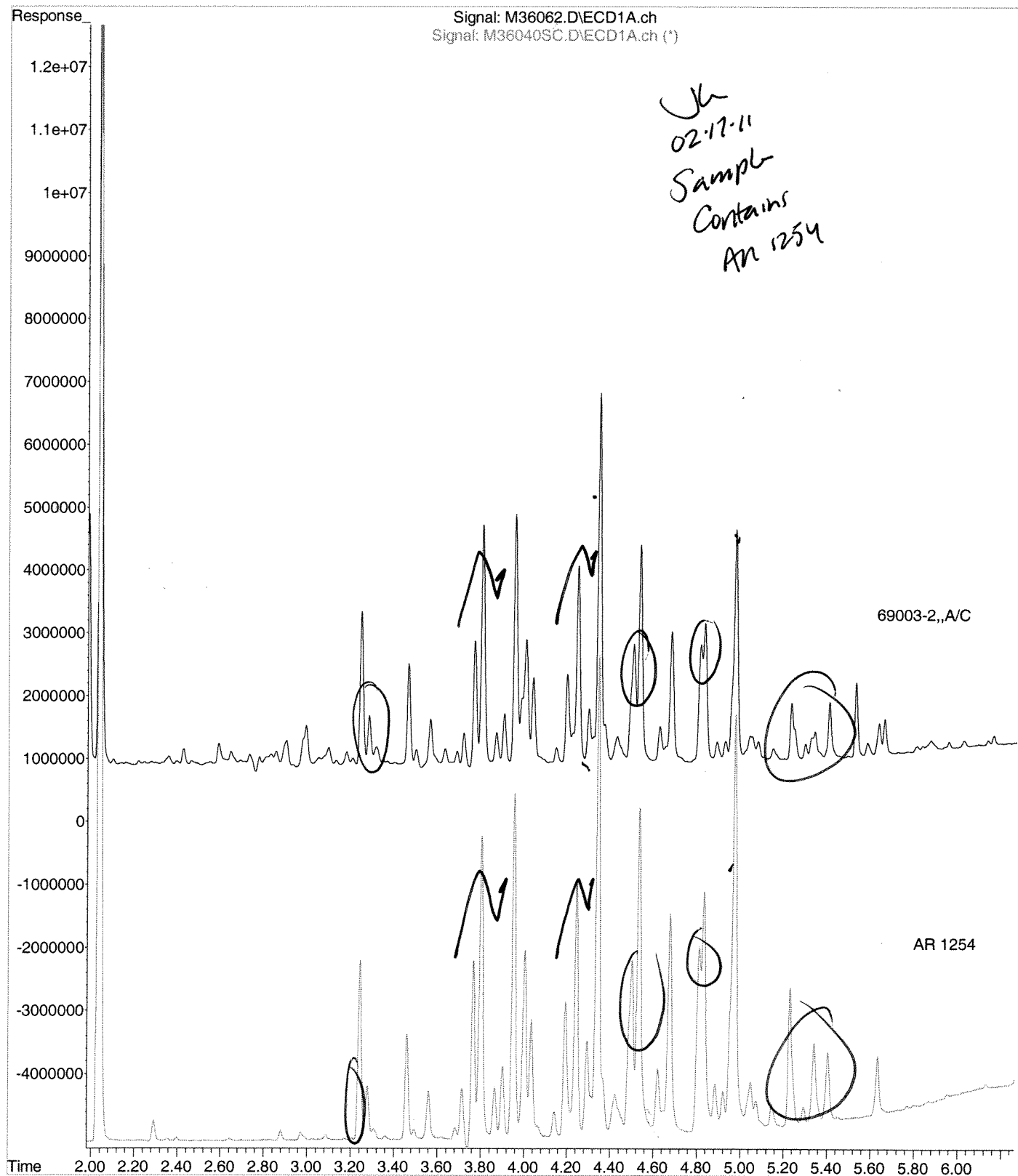
Data Path : C:\msdchem\1\DATA\021511-M\
Data File : M36062.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 15 Feb 2011 2:55 pm
Operator : JK
Sample : 69033-2,,A/C
Misc : SOIL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Feb 17 11:33:51 2011
Quant Method : C:\msdchem\1\METHODS\PCB020711.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Mon Feb 07 15:22:15 2011
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\021511-M\M36062.D
Operator : JK
Acquired : 15 Feb 2011 2:55 pm using AcqMethod PEST.M
Instrument : Instrument M
Sample Name: 69033-2,,A/C
Misc Info : SOIL
Vial Number: 8



Ms. Amy Wallace
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February 17, 2011

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBC-038

Lab Sample ID: 69033-3
Matrix: Solid
Percent Solid: 99
Dilution Factor: 1.0
Collection Date: 02/09/11
Lab Receipt Date: 02/10/11
Extraction Date: 02/10/11
Analysis Date: 02/15/11

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	525
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	70	%
Decachlorobiphenyl	45	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.



PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 69033
GC Column #1: STX-CLPesticides I	Sample: 69033-3,,A/C
Column ID: 0.25 mm	Data File: M36063.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 0.9
Column ID: 0.25 mm	

Column #1		Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	525	517	1.6	

Column to be used to flag RPD values greater than QC limit of 40%

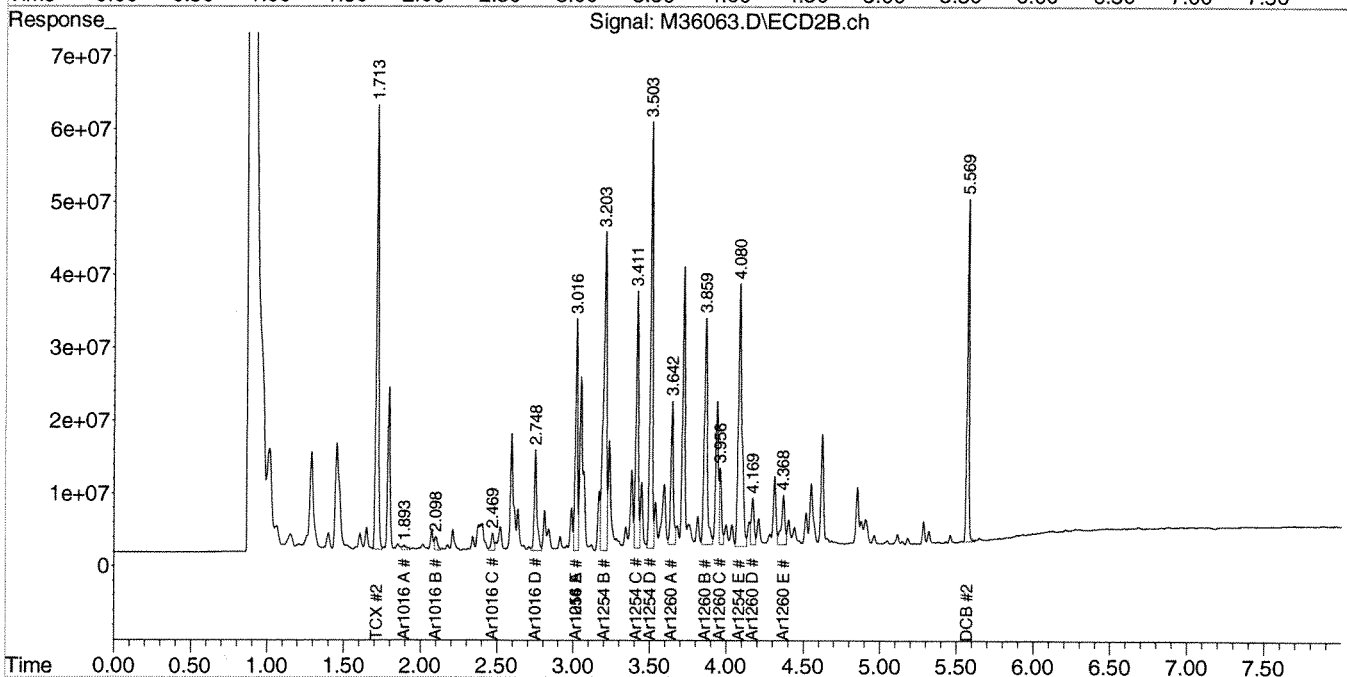
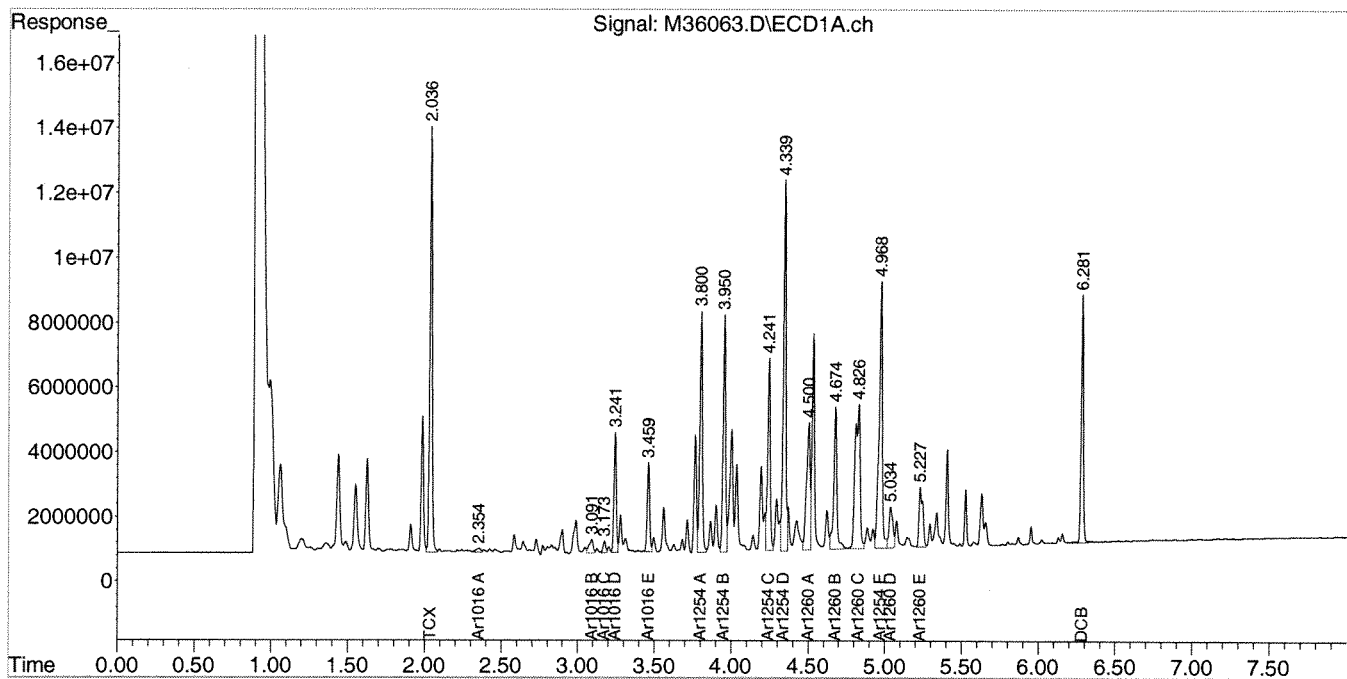
* Values outside QC limits

Comments: _____

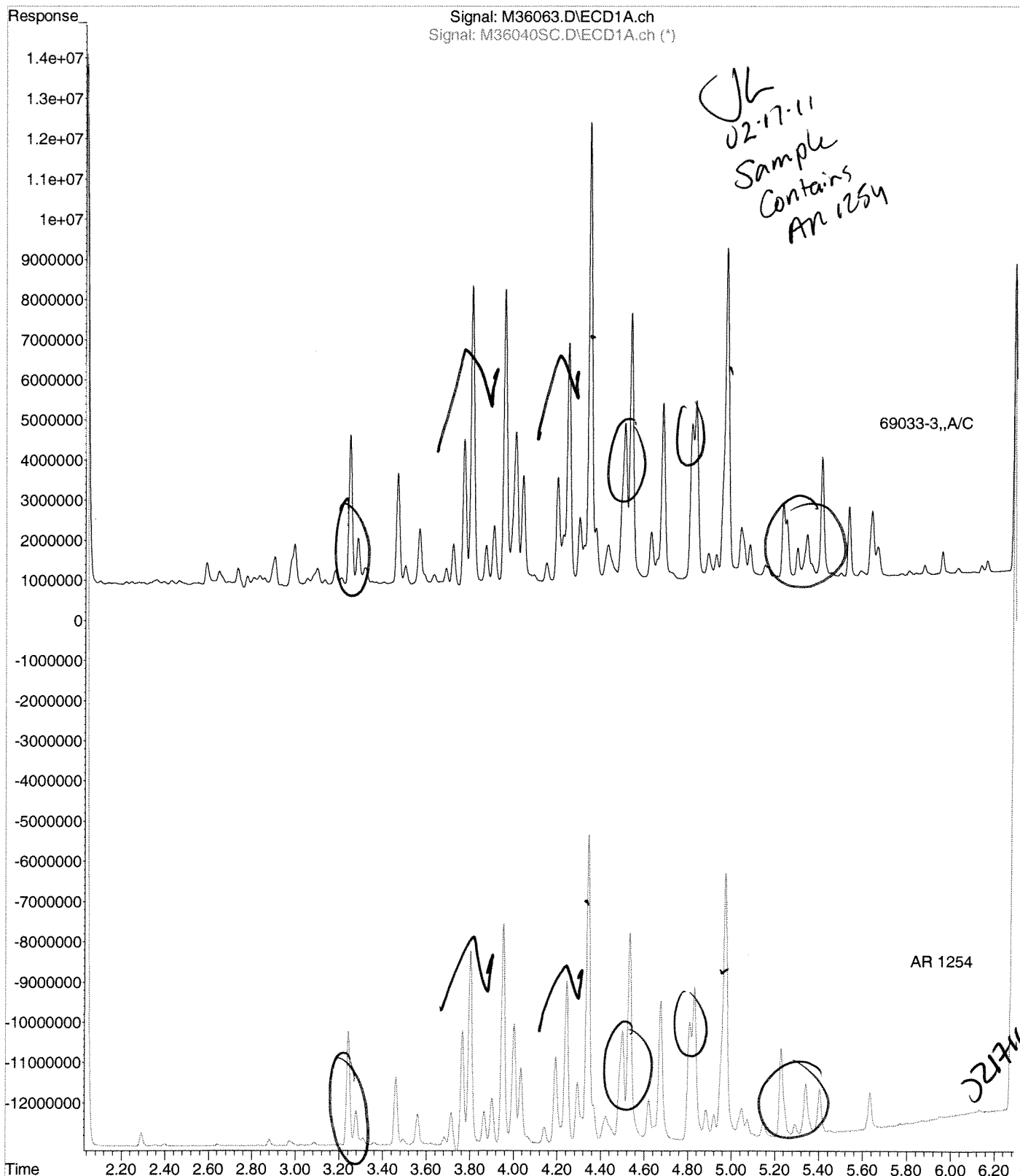
Data Path : C:\msdchem\1\DATA\021511-M\
Data File : M36063.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 15 Feb 2011 3:05 pm
Operator : JK
Sample : 69033-3,,A/C
Misc : SOIL
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Feb 17 11:35:47 2011
Quant Method : C:\msdchem\1\METHODS\PCB020711.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Mon Feb 07 15:22:15 2011
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\021511-M\M36063.D
Operator : JK
Acquired : 15 Feb 2011 3:05 pm using AcqMethod PEST.M
Instrument : Instrument M
Sample Name: 69033-3,,A/C
Misc Info : SOIL
Vial Number: 9



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Portland ME 04102

February 17, 2011

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine- Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBC-040

Lab Sample ID: 69033-4
Matrix: Solid
Percent Solid: 99
Dilution Factor: 1.0
Collection Date: 02/09/11
Lab Receipt Date: 02/10/11
Extraction Date: 02/10/11
Analysis Date: 02/15/11

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	289
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	84	%
Decachlorobiphenyl	50	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB Report

Authorized signature



PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 69033
GC Column #1: STX-CLPesticides I	Sample: 69033-4,,A/C
Column ID: 0.25 mm	Data File: M36064.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 1.0
Column ID: 0.25 mm	

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1254	289	280	3.1	

Column to be used to flag RPD values greater than QC limit of 40%

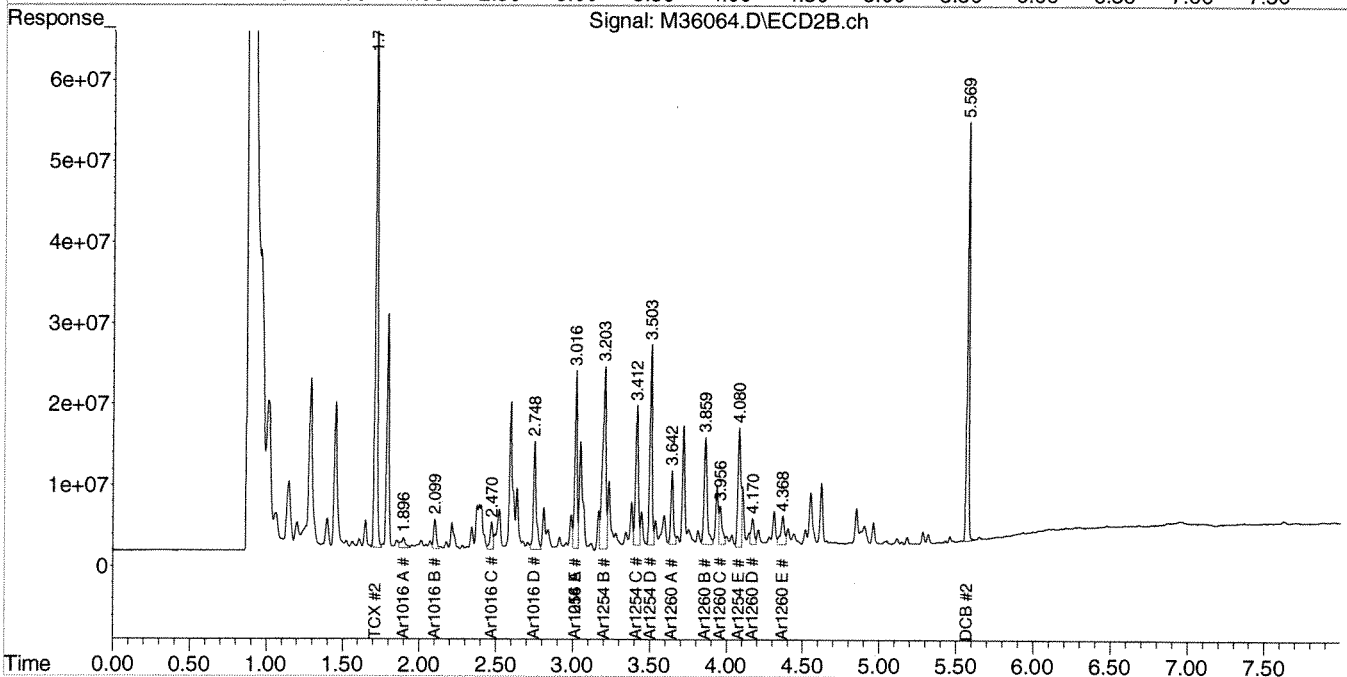
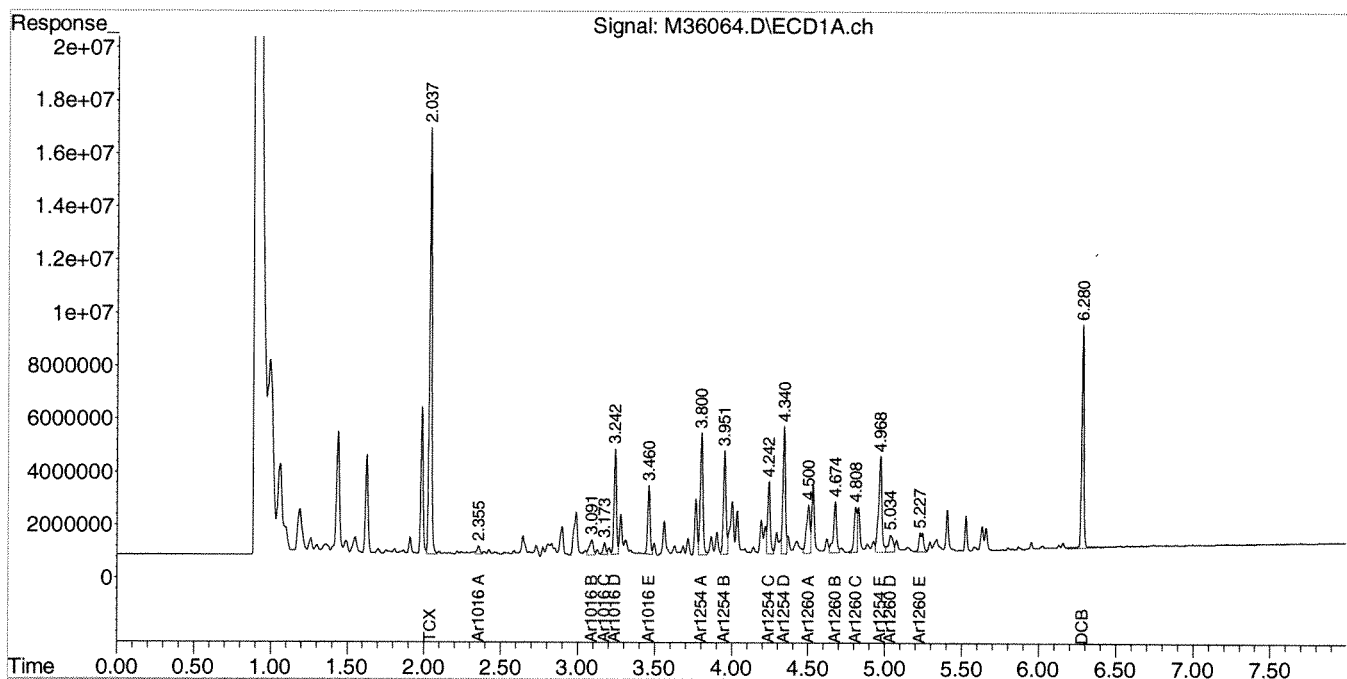
* Values outside QC limits

Comments: _____

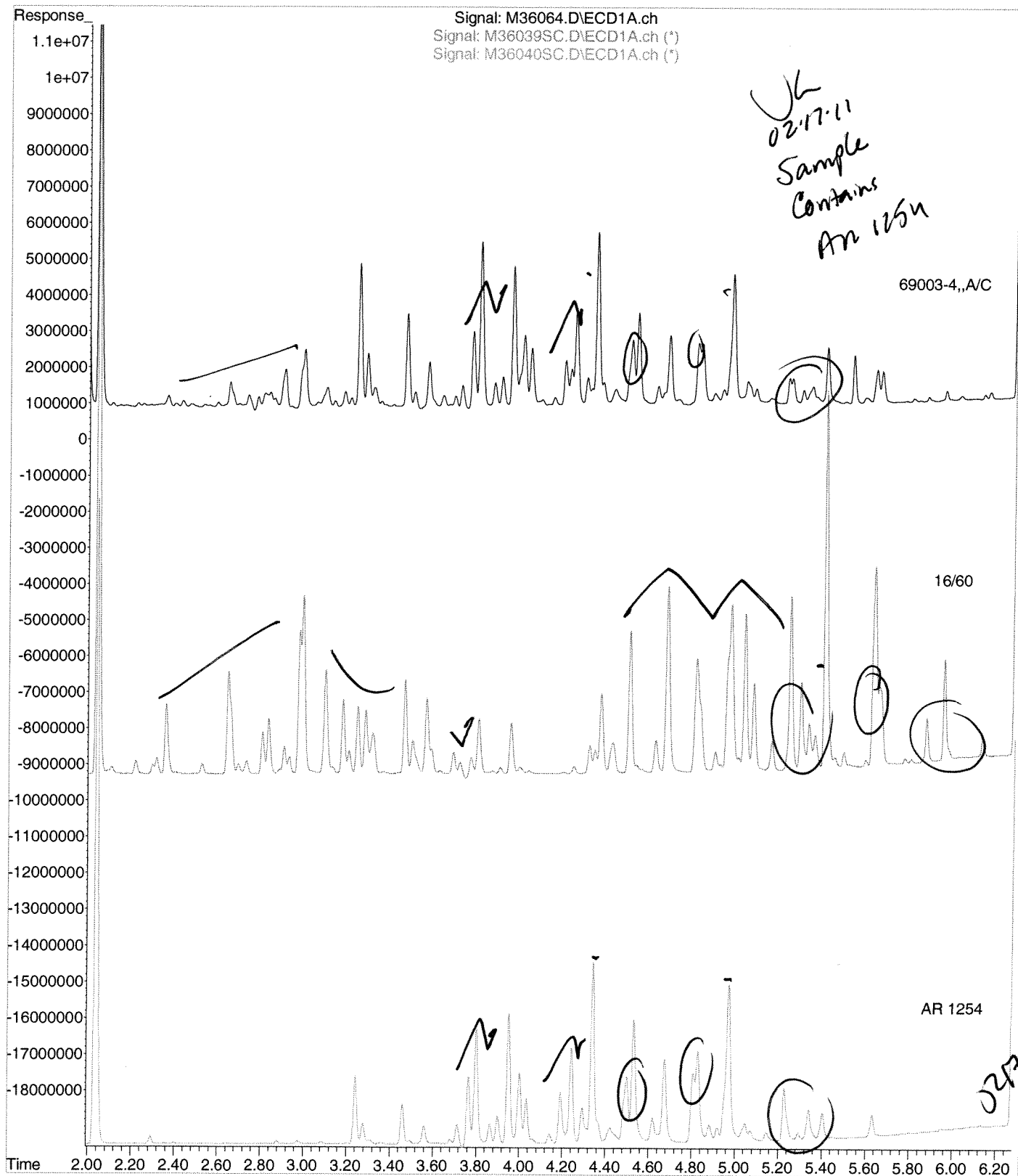
Data Path : C:\msdchem\1\DATA\021511-M\
Data File : M36064.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 15 Feb 2011 3:16 pm
Operator : JK
Sample : 69033-4,,A/C
Misc : SOIL
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Feb 17 11:37:36 2011
Quant Method : C:\msdchem\1\METHODS\PCB020711.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Mon Feb 07 15:22:15 2011
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\021511-M\M36064.D
Operator : JK
Acquired : 15 Feb 2011 3:16 pm using AcqMethod PEST.M
Instrument : Instrument M
Sample Name: 69033-4,,A/C
Misc Info : SOIL
Vial Number: 10



PCB QC FORMS

PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M
GC Column #1: STX-CLPesticides I
Column ID: 0.25 mm
GC Column #2: STX-CLPesticides II
Column ID: 0.25 mm

SDG: 69033

[illegible]

	Lower Limit	Upper Limit
SMC #1 = TCX	40	130
SMC #2 = DCB	40	130

Column to be used to flag recovery values outside of QC limits
* Values outside QC limits
D System Monitoring Compound diluted out

PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M
GC Column #1: STX-CLPesticides I
Column ID: 0.25 mm
GC Column #2: STX-CLPesticides II
Column ID: 0.25 mm

SDG: 69033

[illegible]

	Lower Limit	Upper Limit
SMC #1 = TCX	40	130
SMC #2 = DCB	40	130

Column to be used to flag recovery values outside of QC limits
* Values outside QC limits
D System Monitoring Compound diluted out

PCB SOIL
LABORATORY CONTROL SAMPLE/DUPLICATE
PERCENT RECOVERY

Instrument ID: M

GC Column #1: STX-CLPesticides I

Column ID: 0.25 mm

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

SDG: 69033

Non-spiked sample: B021011PSOX,,A/C

Spike: L021011PSOX,,A/C

Spike duplicate: LD021011PSOX,,A/C

	LCS SPIKE	LCSD SPIKE	LOWER	UPPER	RPD	NON-SPIKE	SPIKE	SPIKE		SPIKE DUP		SPIKE DUP			
COMPOUND	ADDED (ug/kg)	ADDED (ug/kg)	LIMIT	LIMIT	LIMIT	RESULT (ug/kg)	RESULT (ug/kg)	% REC	#	RESULT (ug/kg)	% REC	#	RPD	#	
PCB 1016	200	200	65	140	30	0	206	103		190	95		8.0		
PCB 1260	200	200	60	130	30	0	201	101		189	94		6.5		
PCB 1016 #2	200	200	65	140	30	0	264	132		215	108		20.3		
PCB 1260 #2	200	200	60	130	30	0	197	99		188	94		4.9		

Column to be used to flag recovery and RPD values outside of QC limits

* Values outside QC limits

LCS/LCSD spike added values have been weight adjusted.

Non-spike result of "0" used in place of "U" to allow calculation of spike recovery.

Comments: _____

CHAIN OF CUSTODIES

Chain Of Custody Form

analytical environmental laboratory LLC 195 Commerce Way Suite E Portsmouth, NH 03801 Phone (603) 436-5111 Fax (603) 430-2151		For Analytics Use Only Rev. 5/06/18/08	
Project#: 200802 Company: Woodard & Curran Contact: Amy Wallace Address: 41 Hutchins Drive Portland, ME Phone: (207) 774-2112 PO#: Quote #		Proj. Name: UMaine - Stewart Commons Matrix Key: C = Concrete WP = Wipe WW = Wastewater SW = Surface Water GW = Groundwater DW = Drinking Water S = Soil/Sludge O = Oil E = Extract X = Other	
Samples were: 1) Shipped or hand-delivered 4.50 2) Temp blank °C 3) Received in good condition Y or N 4) pH checked by: N A 5) Labels checked by: 10/10/11		Received By: [Signature] Date: 2/10/11 Received By: [Signature] Date: 2/10/11 Received By: [Signature] Date: 2/10/11	
Container Key: P=plastic G=glass		Container number/type Matrix Other	
Station Identification Sample Date Sample Time Analysis		pH Analytics Sample #	
VMSL-CBC-034 2/10/11 8:32 PUB 8082 w/soxhlet Exh		C 1 69033-1	
VMSL-CBC-036 8:48 8:48		C 1 3	
VMSL-CBC-038 9:18 9:18		C 1 4	
VMSL-CBC-040 9:35 9:35		C 1 4	
Comments / Instructions: soxhlet/8082		Project Requirements: *Fee may apply	
Email Results to: a.wallace@woodardcurran.com sluczk@woodardcurran.com jhamete@woodardcurran.com		Report Type: MCP* <input checked="" type="checkbox"/> Level II* CTCP* <input type="checkbox"/> Level III* DOD* <input type="checkbox"/> Level IV* <input type="checkbox"/> Standard	
Turnaround Time (TAT) <input type="checkbox"/> 24hr* <input type="checkbox"/> 48hr* <input checked="" type="checkbox"/> 5 Days* <input type="checkbox"/> 72hr* <input type="checkbox"/> 10 Days		State: NH <input type="checkbox"/> MA <input type="checkbox"/> ME <input checked="" type="checkbox"/> CT <input type="checkbox"/> RI <input type="checkbox"/> Other:	
Fee may apply; lab approval required		State Standard: (eg. S-1 or GW-1) EDD Required: Y N Type: PDF	

ANALYTICS SAMPLE RECEIPT CHECKLIST

AEL LAB#: 69033

CLIENT: WOODARD

PROJECT: UMAINE
STEWART COMMONS

COOLER NUMBER: 63

NUMBER OF COOLERS: 1

DATE RECEIVED: 2-10-11

A: PRELIMINARY EXAMINATION:

DATE COOLER OPENED: 2-10-11

1. Cooler received by(initials): JG

Date Received: 2-10-11

2. Circle one: Hand delivered
(If so, skip 3)

Shipped

3. Did cooler come with a shipping slip?

Y (N)

3a. Enter carrier name and airbill number here: _____

4. Were custody seals on the outside of cooler?

Y (N)

How many & where: _____ Seal Date: _____

Seal Name: _____

5. Did the custody seals arrive unbroken and intact upon arrival?

Y (N/A)

6. COC#: _____

7. Were Custody papers filled out properly (ink, signed, etc)?

(Y) N

8. Were custody papers sealed in a plastic bag?

(Y) N

9. Did you sign the COC in the appropriate place?

(Y) N

10. Was the project identifiable from the COC papers?

(Y) N

11. Was enough ice used to chill the cooler?

(Y) N

Temp. of cooler:

4.5°

B. Log-In: Date samples were logged in:

2-10-11

By: JG

12. Type of packing in cooler(bubble wrap, popcorn)

Y (N)

13. Were all bottles sealed in separate plastic bags?

Y (N)

14. Did all bottles arrive unbroken and were labels in good condition?

(Y) N

15. Were all bottle labels complete(ID, Date, time, etc.)

(Y) N

16. Did all bottle labels agree with custody papers?

(Y) N

17. Were the correct containers used for the tests indicated:

(Y) N

18. Were samples received at the correct pH?

Y (N/A)

19. Was sufficient amount of sample sent for the tests indicated?

(Y) N

20. Were all samples submitted within holding time?

Y N

21. Were bubbles absent in VOA samples?

Y (N/A)

If NO, List Sample ID's and Lab #s: _____

22. Laboratory labeling verified by (initials):

JG

Date:

2/10/11

November 12, 2010

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

**RE: Analytical Results Case Narrative
Analytics # 68266
University of Maine Stewart Commons Proj# 222822**

Dear Ms. Wallace;

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

- Case Narrative/Non-Conformance Summary
- Sample Log Sheet - Cover Page
- PCB Form 1 Data Sheet for Samples and Blanks
- Chromatograms
- PCB Form 10 Confirmation Results
- PCB Form 3 MS/MSD (LCS) Recoveries
- Chain of Custody (COC) Forms

QC NON-CONFORMANCE SUMMARY

Sample Receipt:

No exceptions.

PCBs by EPA Method 8082:

Samples 68266-1 thru 68266-3 and 68266-6 thru 68266-10 required dilution due to the concentrations of PCBs detected in the samples.

Sample 68266-5 had high recovery for surrogate Tetrachloro-m-xylene (TCX) on column#1. Column#2 was in control for both surrogates. Results were reported without qualification.

If you have any questions on these results, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC



Stephen L. Knollmeyer
Laboratory Director

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

Report Number: 68266

Revision: Rev. 0

Re: UMaine Stewart Commons (Project No: 222822)

Enclosed are the results of the analyses on your sample(s). Samples were received on 05 November 2010 and analyzed for the tests listed. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Sample Analysis: The attached pages detail the Client Sample IDs, Lab Sample IDs, and Analyses requested

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, Virginia, Maryland, and is accredited by the Department of Defense (DOD) ELAP program. A list of actual certified parameters is available upon request.

If you have any questions on these results, please do not hesitate to contact us.

Authorized signature


Stephen L. Knollmeyer Lab. Director

Date

11/12/2010

This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.

CLIENT: Woodard & Curran

REPORT NUMBER: 68266

REV: Rev. 0

PROJECT: UMaine Stewart Commons (Project No: 222822)

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
68266-1	11/04/10	UMSC-CBS-013	EPA 8082 (PCBs only)	
68266-2	11/04/10	UMSC-CBS-014	EPA 8082 (PCBs only)	
68266-3	11/04/10	UMSC-CBS-015	EPA 8082 (PCBs only)	
68266-4	11/04/10	UMSC-CBS-016	EPA 8082 (PCBs only)	
68266-5	11/04/10	UMSC-CBS-017	EPA 8082 (PCBs only)	
68266-6	11/04/10	UMSC-CBS-018	EPA 8082 (PCBs only)	
68266-7	11/04/10	UMSC-CBS-019	EPA 8082 (PCBs only)	
68266-8	11/04/10	UMSC-CBS-020	EPA 8082 (PCBs only)	
68266-9	11/04/10	UMSC-CBSD-021	EPA 8082 (PCBs only)	
68266-10	11/04/10	UMSC-CBC-022	EPA 8082 (PCBs only)	
68266-11	11/04/10	UMSC-CBC-025	EPA 8082 (PCBs only)	
68266-12	11/04/10	UMSC-CBC-027	EPA 8082 (PCBs only)	
68266-13	11/04/10	UMSC-CBB-028	EPA 8082 (PCBs only)	
68266-14	11/04/10	UMSC-CBB-029	EPA 8082 (PCBs only)	
68266-15	11/04/10	UMSC-CWG-030	EPA 8082 (PCBs only)	
68266-16	11/04/10	UMSC-CWG-031	EPA 8082 (PCBs only)	
68266-17	11/04/10	UMSC-CWG-032	EPA 8082 (PCBs only)	
68266-18	11/04/10	UMSC-CWG-033	EPA 8082 (PCBs only)	

Surrogate Compound Limits

	Matrix: Units:	Aqueous % Recovery	Solid % Recovery	Method
Volatile Organic Compounds - Drinking Water				
1,4-Difluorobenzene		70-130		EPA 524.2
Bromofluorobenzene		70-130		
1,2-Dichlorobenzene-d4		70-130		
Volatile Organic Compounds				
1,2-Dichloroethane-d4		70-120	70-120	EPA 624/8260B
Toluene-d8		85-120	85-120	
Bromofluorobenzene		75-120	75-120	
Semi-Volatile Organic Compounds				
2-Fluorophenol		20-110	35-105	EPA 625/8270C
d5-Phenol		15-110	40-100	
d5-nitrobenzene		40-110	35-100	
2-Fluorobiphenyl		50-110	45-105	
2,4,6-Tribromophenol		40-110	40-125	
d14-p-terphenyl		50-130	30-125	
PAH's by SIM				
d5-nitrobenzene		21-110	35-110	EPA 8270C
2-Fluorobiphenyl		36-121	45-105	
d14-p-terphenyl		33-141	30-125	
Pesticides and PCBs				
2,4,5,6-Tetrachloro-m-xylene (TCX)		46-122	40-130	EPA 608/8082
Decachlorobiphenyl (DCB)		40-135	40-130	
Herbicides				
Dichloroacetic acid (DCAA)		30-150	30-150	
Gasoline Range Organics/TPH Gasoline				
Trifluorotoluene TFT (FID)		60-140	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)		60-140	60-140	
Trifluorotoluene TFT (PID)		60-140	60-140	
Bromofluorobenzene (BFB) (PID)		60-140	60-140	
Diesel Range Organics/TPH Diesel				
m-terphenyl		60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH
Volatile Petroleum Hydrocarbons				
2,5-Dibromotoluene (PID)		70-130	70-130	MADEP VPH May 2004 Rev1.1
2,5-Dibromotoluene (FID)		70-130	70-130	
Extracatable Petroleum Hydrocarbons				
1-chloro-octadecane (aliphatic)		40-140	40-140	MADEP EPH May 2004 Rev1.1
o-Terphenyl (aromatic)		40-140	40-140	
2-Fluorobiphenyl (Fractionation)		40-140	40-140	
2-Bromonaphthalene (fractionation)		40-140	40-140	

PCB DATA SUMMARIES

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

November 12, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: Lab QC

Lab Sample ID: B110810PSOX
Matrix: Wipe
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date:
Lab Receipt Date:
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit $\mu\text{g/wipe}$	Results $\mu\text{g/wipe}$
PCB-1016	0.5	U
PCB-1221	0.5	U
PCB-1232	0.5	U
PCB-1242	0.5	U
PCB-1248	0.5	U
PCB-1254	0.5	U
PCB-1260	0.5	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	95	%
Decachlorobiphenyl	59	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

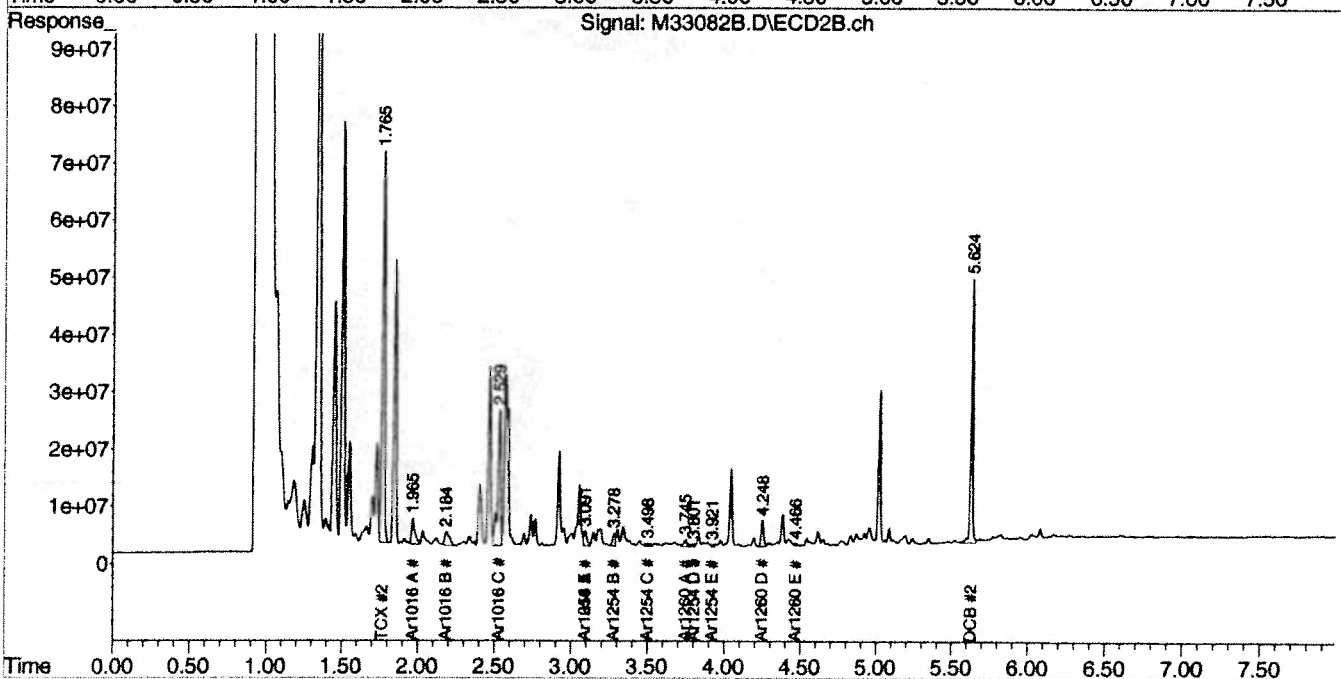
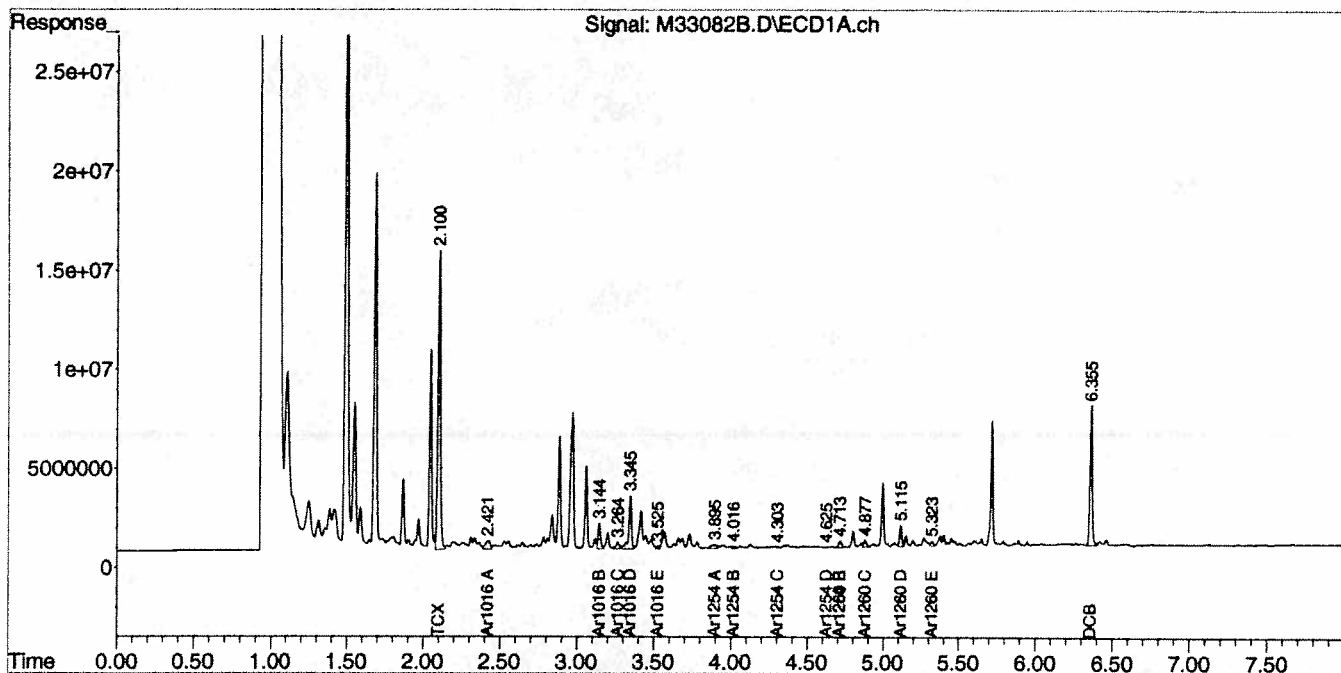
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS:

Data Path : C:\msdchem\1\DATA\111110-M\
 Data File : M33082B.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Nov 2010 1:46 pm
 Operator : JK
 Sample : B110810PSOX,,A/C
 Misc : SOIL
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Nov 12 08:39:14 2010
 Quant Method : C:\msdchem\1\METHODS\PCB110310.M
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
 QLast Update : Wed Nov 03 16:47:44 2010
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 2 uL
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



Ms. Amy Wallace
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35 NE Business Center Suite 180
Andover MA 01810

November 12, 2010

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: Lab QC

SAMPLE DATA

Lab Sample ID: B110810PSOX RR
Matrix: Soil
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date:
Lab Receipt Date:
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	U
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	95	%
Decachlorobiphenyl	61	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

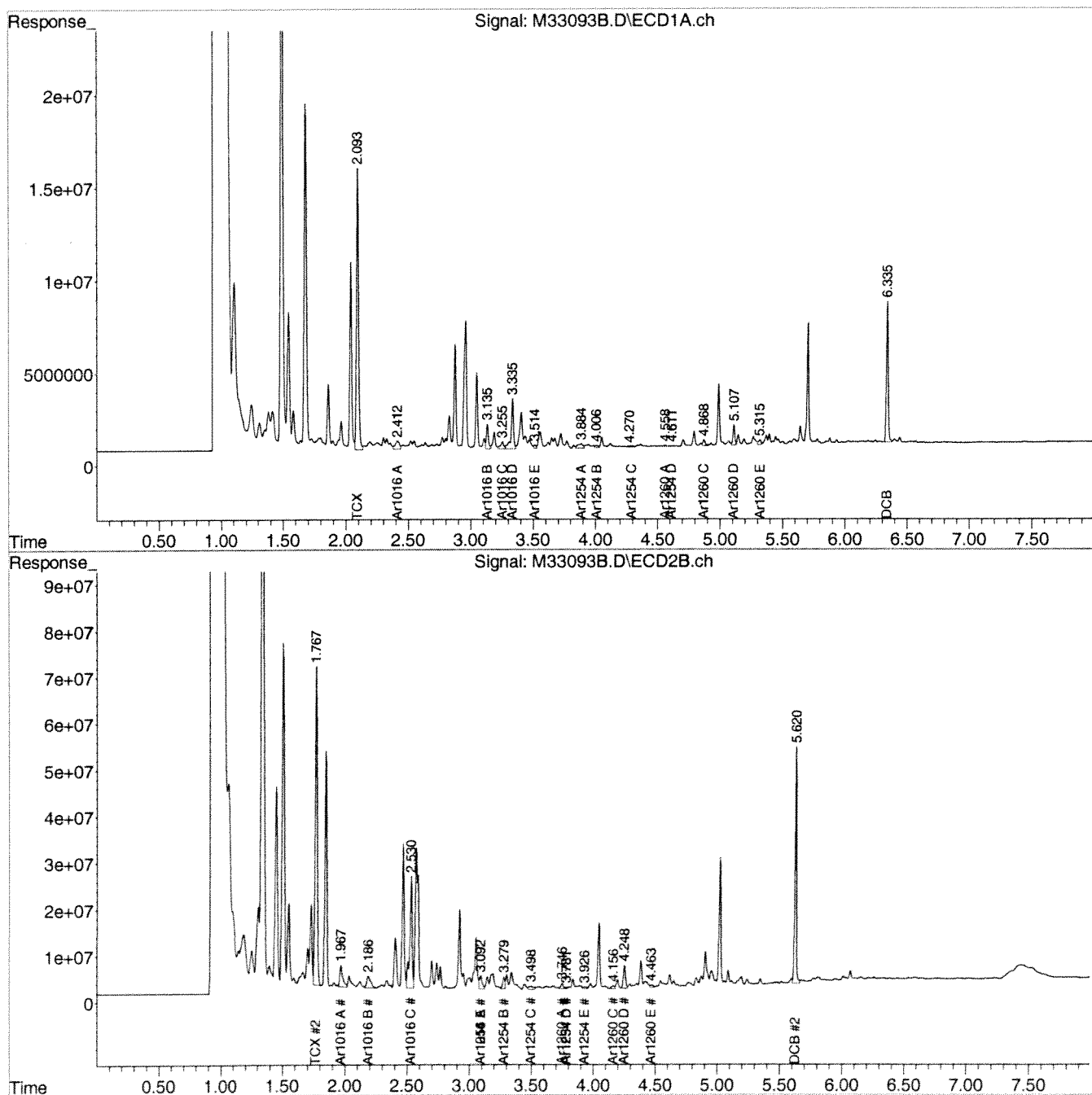
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33093B.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 3:26 pm
Operator : JK
Sample : B110810PSOX,RR,,A/C
Misc : SOIL
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:36:54 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



Ms. Amy Wallace
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35 NE Business Center Suite 180
Andover MA 01810

November 12, 2010

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons

Project Number: 222822

Field Sample ID: Lab QC

SAMPLE DATA

Lab Sample ID: B110810PSOX RR

Matrix: Soil

Percent Solid: N/A

Dilution Factor: 1.0

Collection Date:

Lab Receipt Date:

Extraction Date: 11/08/10

Analysis Date: 11/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	U
PCB-1260	33	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	98	%
Decachlorobiphenyl	62	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

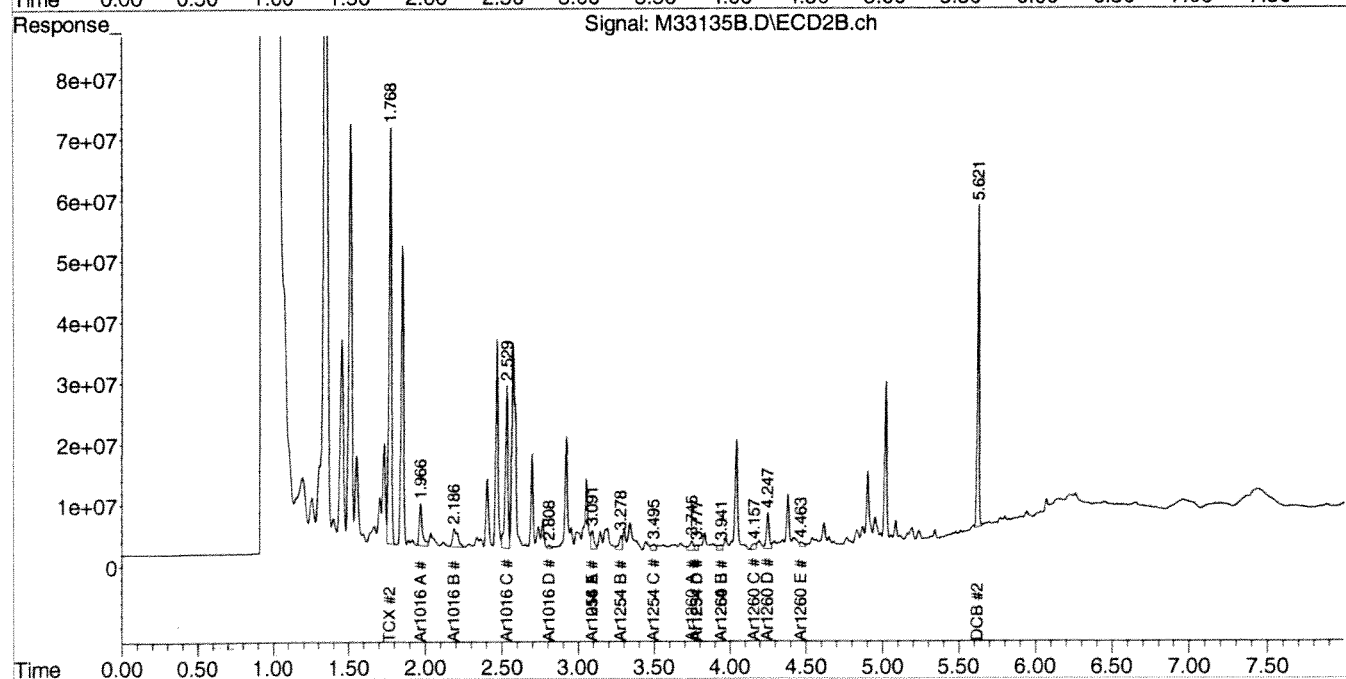
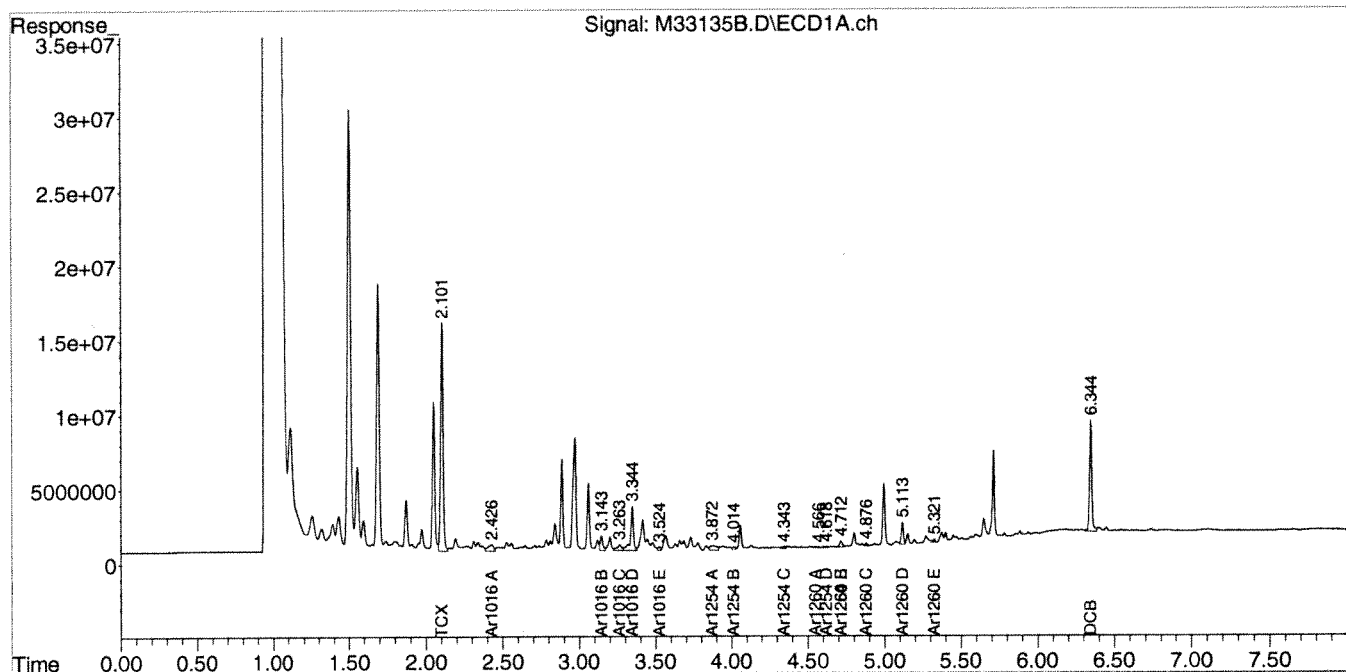
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Data Path : C:\msdchem\1\DATA\111210-M\
Data File : M33135B.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2010 11:39 am
Operator : JK
Sample : B110810PSOX,RR3,,A/C
Misc : SOIL
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 12:26:02 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

November 12, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBS-013

Lab Sample ID: 68266-1
Matrix: Solid
Percent Solid: 79
Dilution Factor: 24
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/12/10

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	790	U
PCB-1221	790	U
PCB-1232	790	U
PCB-1242	790	U
PCB-1248	790	U
PCB-1254	790	9980
PCB-1260	790	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68266
GC Column #1: STX-CLPesticides I	Sample: 68266-1,1:20,,A/C
Column ID: 0.25 mm	Data File: M33137.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 23.9
Column ID: 0.25 mm	

Column #1		Column #2		RPD	#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1254	9975	8215		19.4	

Column to be used to flag RPD values greater than QC limit of 40%

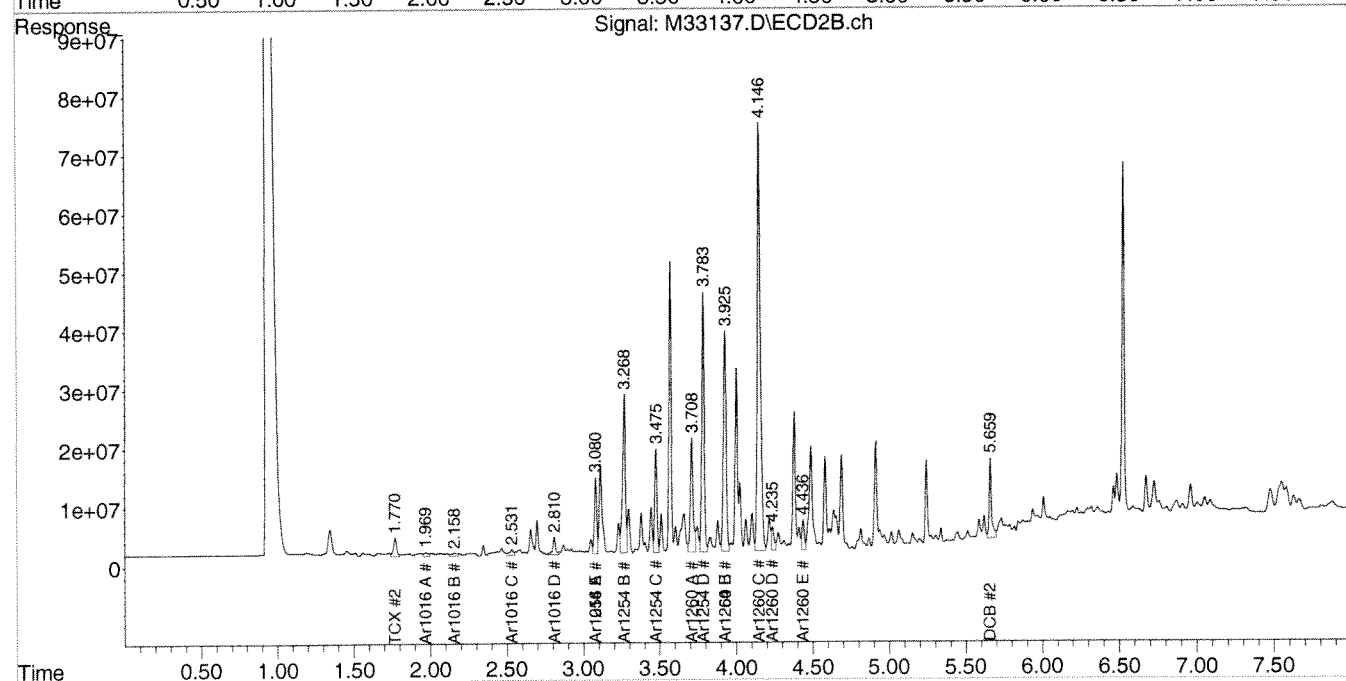
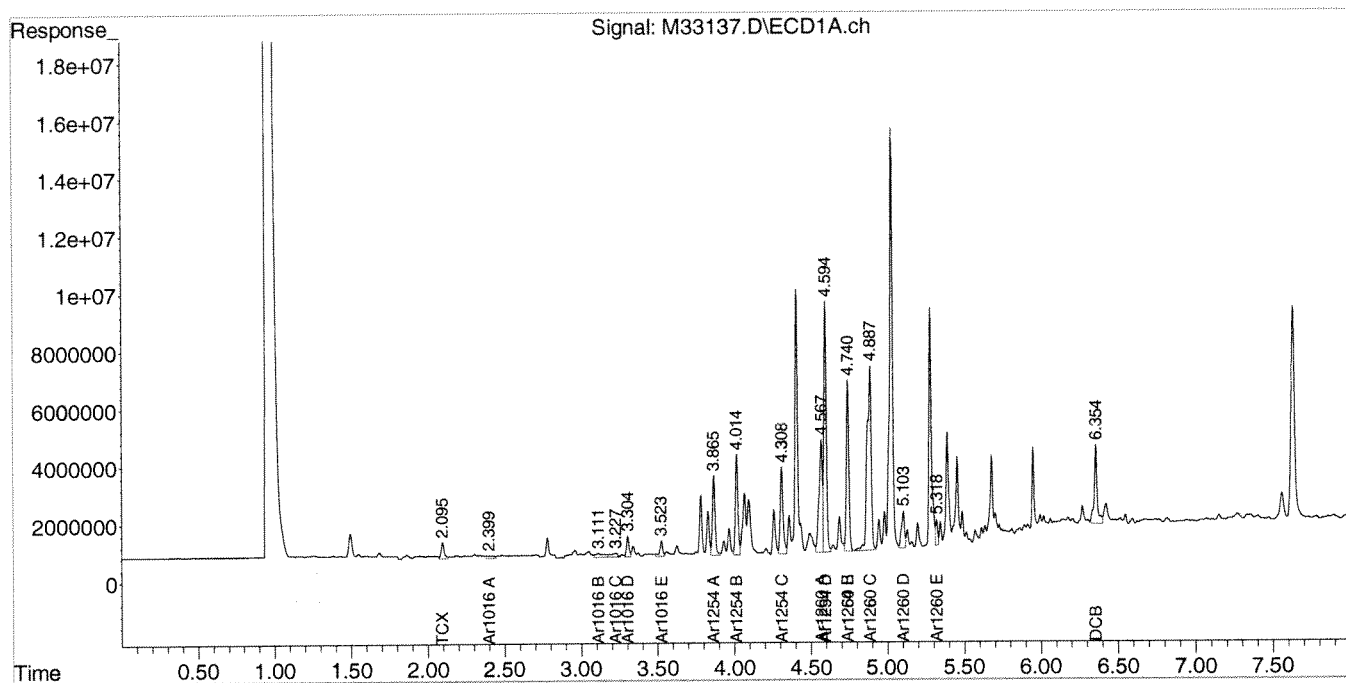
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111210-M\
 Data File : M33137.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2010 11:59 am
 Operator : JK
 Sample : 68266-1,1:20,,A/C
 Misc : SOIL
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Nov 12 12:26:56 2010
 Quant Method : C:\msdchem\1\METHODS\PCB110310.M
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
 QLast Update : Wed Nov 03 16:47:44 2010
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 2 uL
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

November 12, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons

Project Number: 222822

Field Sample ID: UMSC-CBS-014

Lab Sample ID: 68266-2

Matrix: Solid

Percent Solid: 80

Dilution Factor: 24

Collection Date: 11/04/10

Lab Receipt Date: 11/05/10

Extraction Date: 11/08/10

Analysis Date: 11/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	790	U
PCB-1221	790	U
PCB-1232	790	U
PCB-1242	790	U
PCB-1248	790	U
PCB-1254	790	9890
PCB-1260	790	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68266
GC Column #1: STX-CLPesticides I	Sample: 68266-2,1:20,,A/C
Column ID: 0.25 mm	Data File: M33138.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 24.3
Column ID: 0.25 mm	

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	9889	8105	19.8

Column to be used to flag RPD values greater than QC limit of 40%

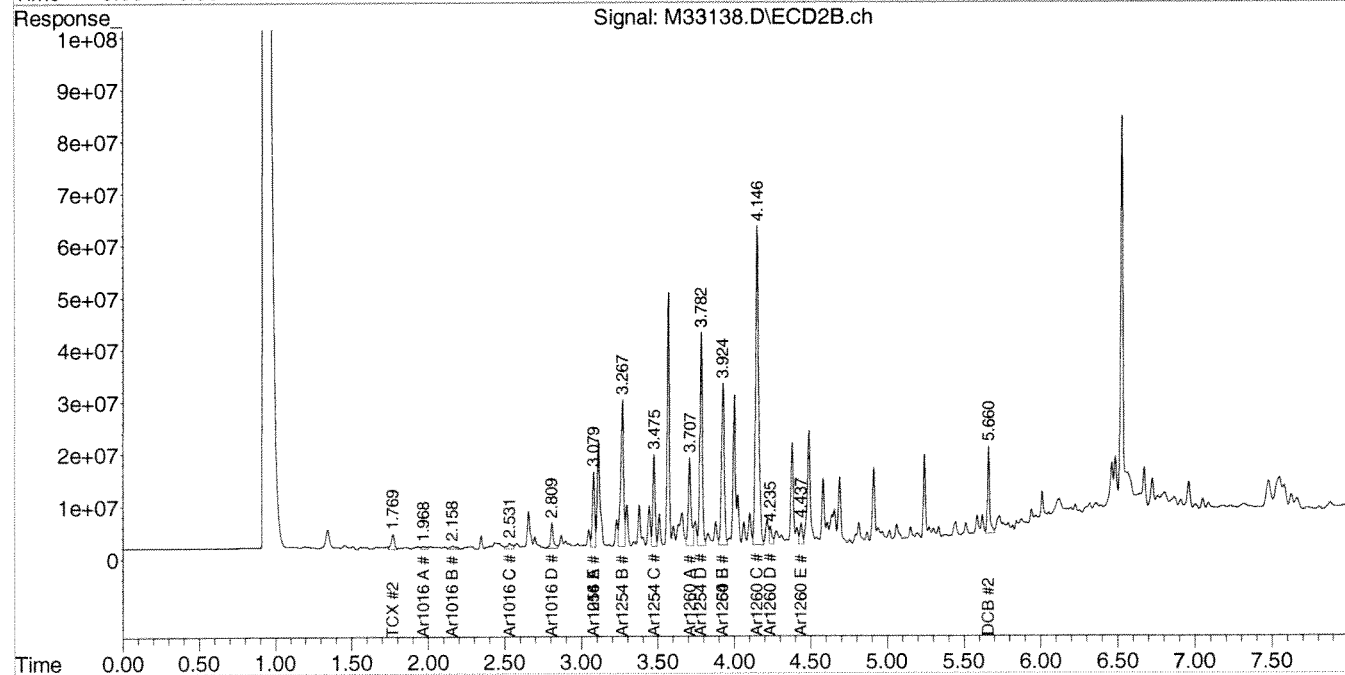
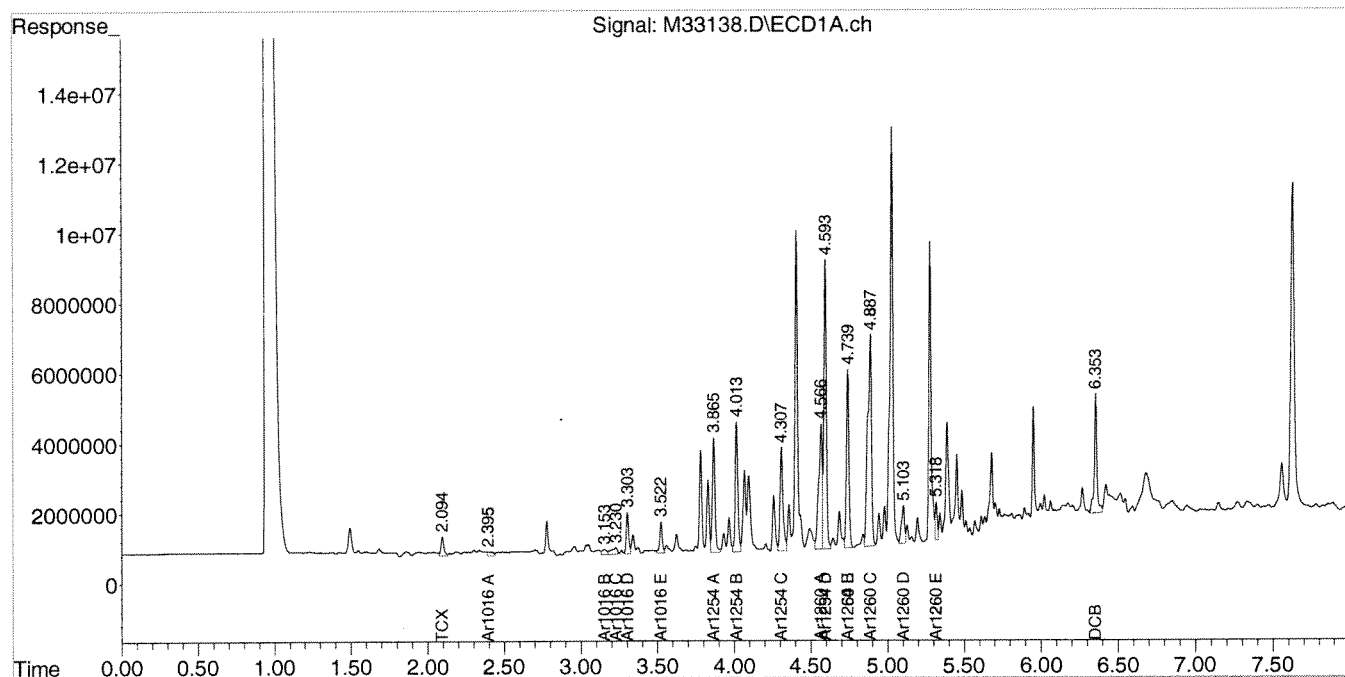
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111210-M\
 Data File : M33138.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2010 12:09 pm
 Operator : JK
 Sample : 68266-2,1:20,,A/C
 Misc : SOIL
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Nov 12 12:27:36 2010
 Quant Method : C:\msdchem\1\METHODS\PCB110310.M
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
 QLast Update : Wed Nov 03 16:47:44 2010
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 2 uL
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

November 12, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBS-015

Lab Sample ID: 68266-3
Matrix: Solid
Percent Solid: 79
Dilution Factor: 62
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	2050	U
PCB-1221	2050	U
PCB-1232	2050	U
PCB-1242	2050	U
PCB-1248	2050	U
PCB-1254	2050	25200
PCB-1260	2050	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.



PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68266
GC Column #1: STX-CLPesticides I	Sample: 68266-3,1:50,,A/C
Column ID: 0.25 mm	Data File: M33139.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 64.0
Column ID: 0.25 mm	

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	25197	19304	26.5

Column to be used to flag RPD values greater than QC limit of 40%

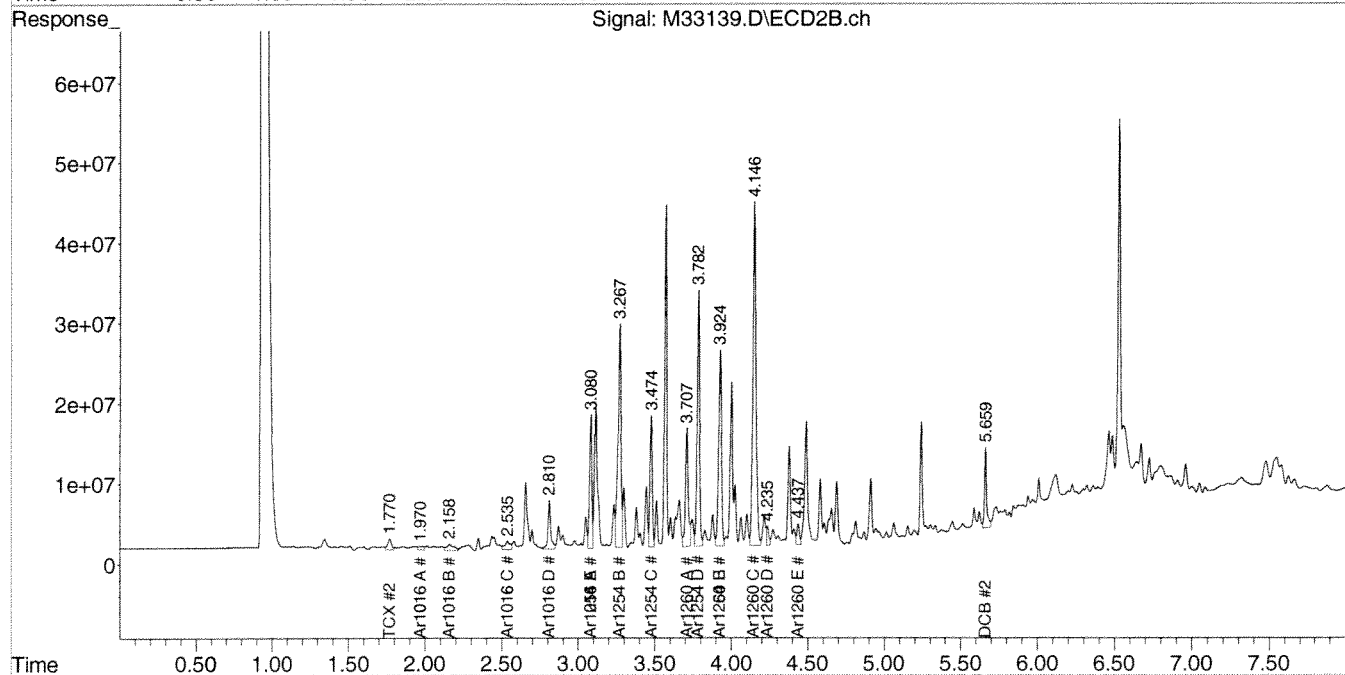
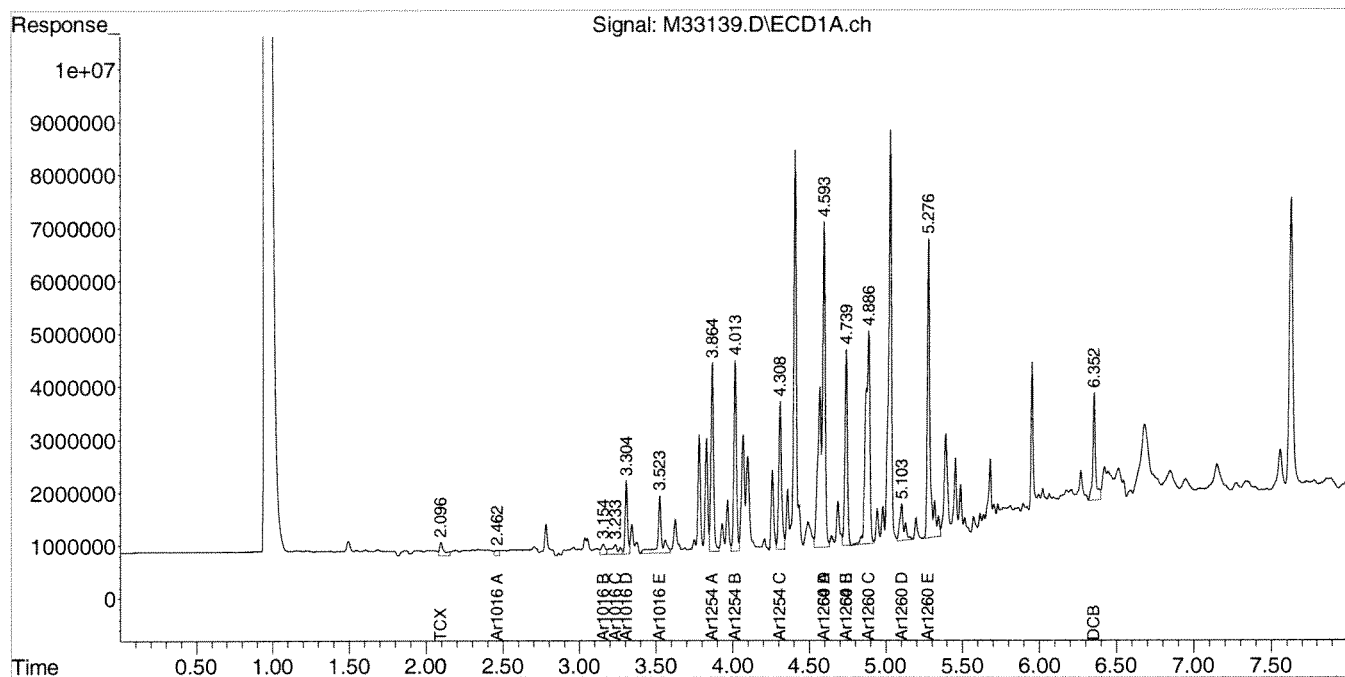
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111210-M\
Data File : M33139.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2010 12:20 pm
Operator : JK
Sample : 68266-3,1:50,,A/C
Misc : SOIL
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 12:31:06 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

November 12, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons

Project Number: 222822

Field Sample ID: UMSC-CBS-016

Lab Sample ID: 68266-4

Matrix: Solid

Percent Solid: 82

Dilution Factor: 1.2

Collection Date: 11/04/10

Lab Receipt Date: 11/05/10

Extraction Date: 11/08/10

Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	40	U
PCB-1221	40	U
PCB-1232	40	U
PCB-1242	40	U
PCB-1248	40	U
PCB-1254	40	U
PCB-1260	40	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	88	%
Decachlorobiphenyl	64	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

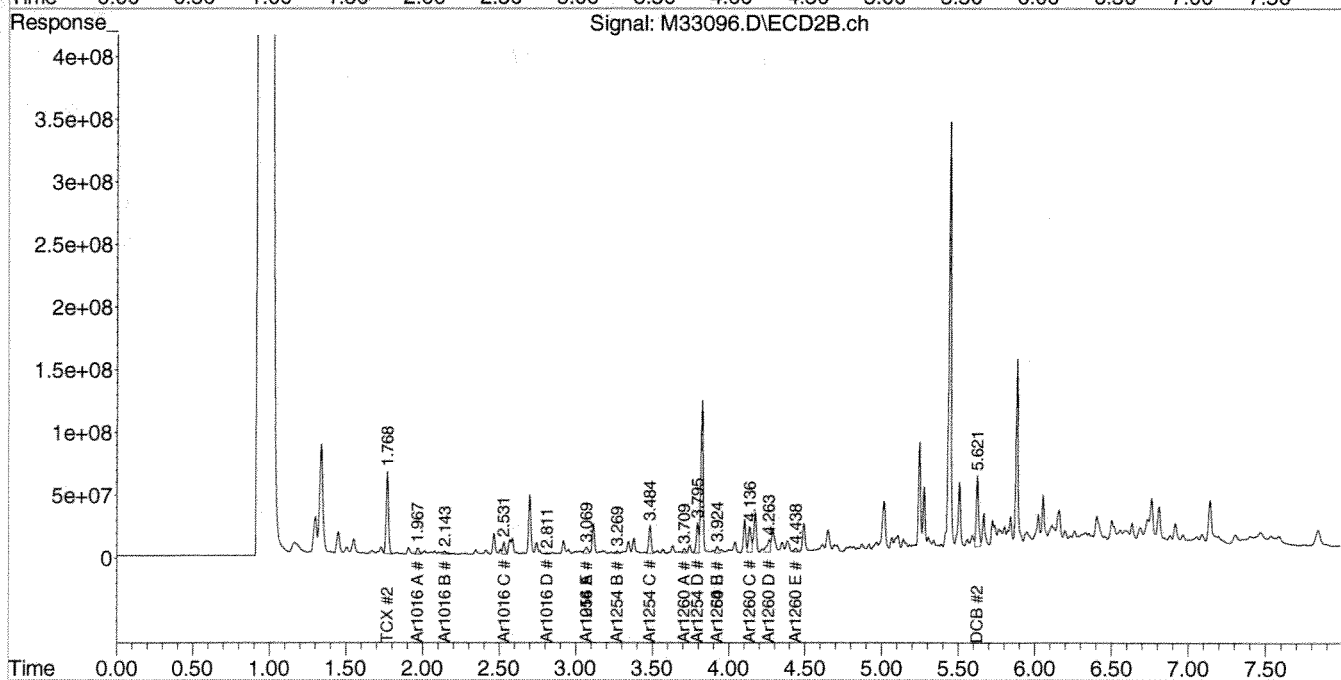
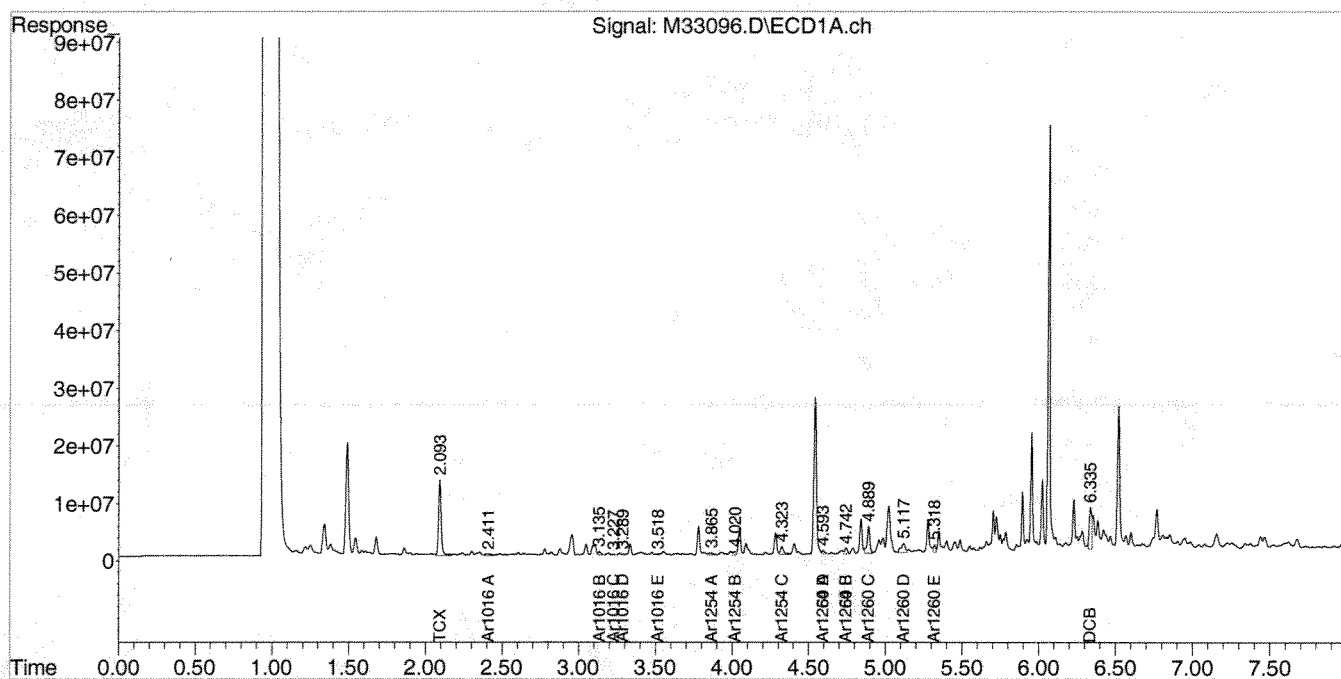
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33096.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 3:56 pm
Operator : JK
Sample : 68266-4,,A/C
Misc : SOIL
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:39:18 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBS-017

Lab Sample ID: 68266-5
Matrix: Solid
Percent Solid: 96
Dilution Factor: 1.0
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	U
PCB-1260	33	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	75	%
Decachlorobiphenyl	69	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

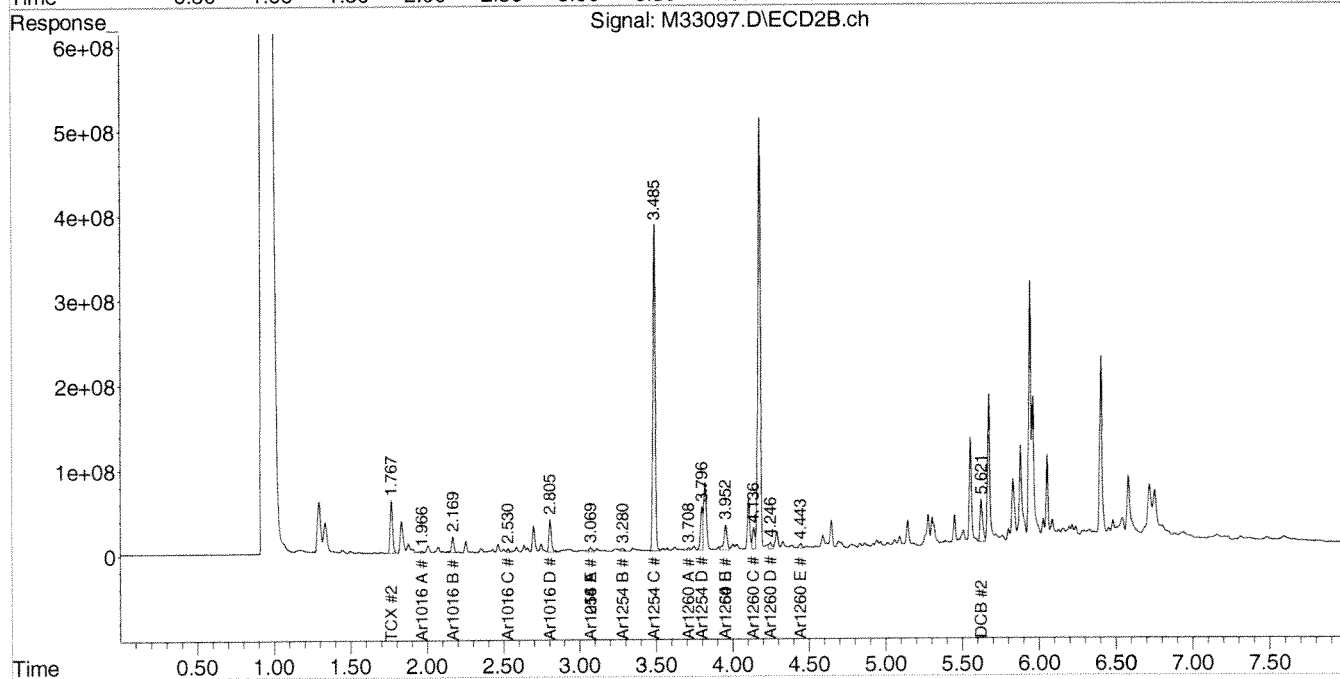
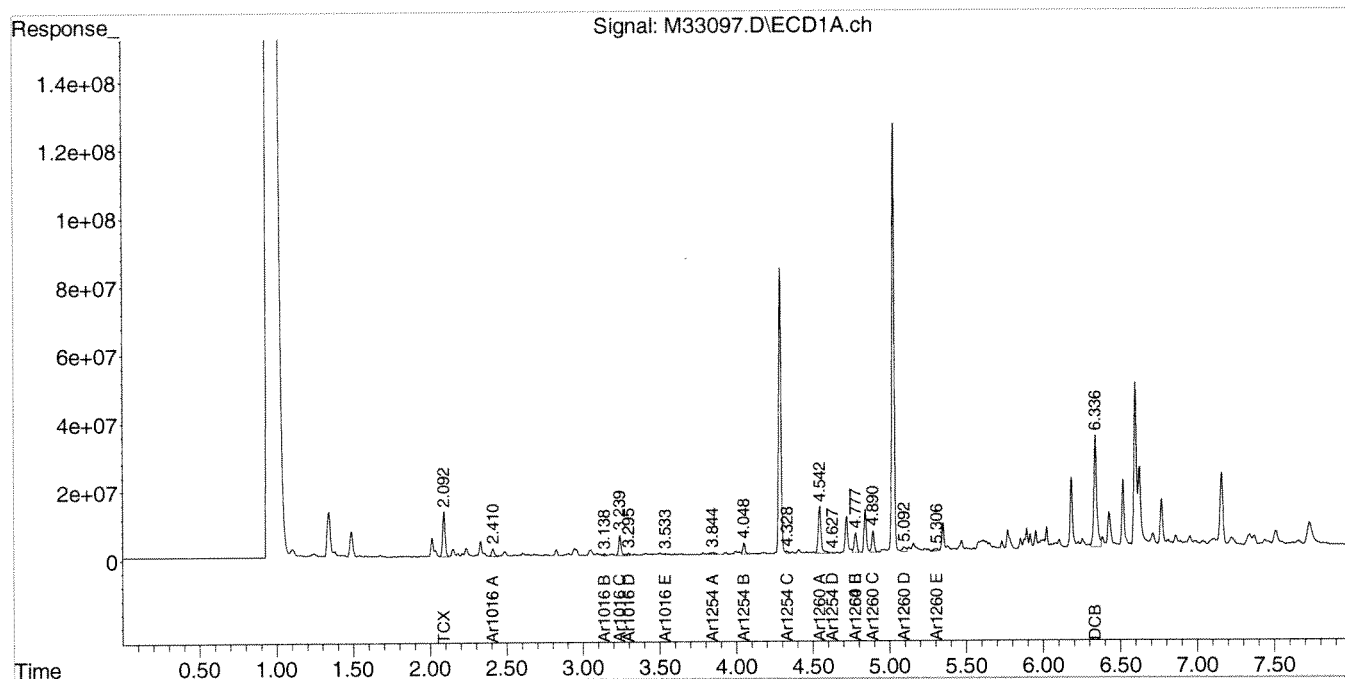
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33097.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 4:07 pm
Operator : JK
Sample : 68266-5,,A/C
Misc : SOIL
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:40:17 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBS-018

Lab Sample ID: 68266-6
Matrix: Solid
Percent Solid: 76
Dilution Factor: 26
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/12/10

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	860	U
PCB-1221	860	U
PCB-1232	860	U
PCB-1242	860	U
PCB-1248	860	U
PCB-1254	860	12500
PCB-1260	860	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68266
GC Column #1: STX-CLPesticides I	Sample: 68266-6,1:20,,A/C
Column ID: 0.25 mm	Data File: M33140.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 25.5
Column ID: 0.25 mm	

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	12491	10976	12.9

Column to be used to flag RPD values greater than QC limit of 40%

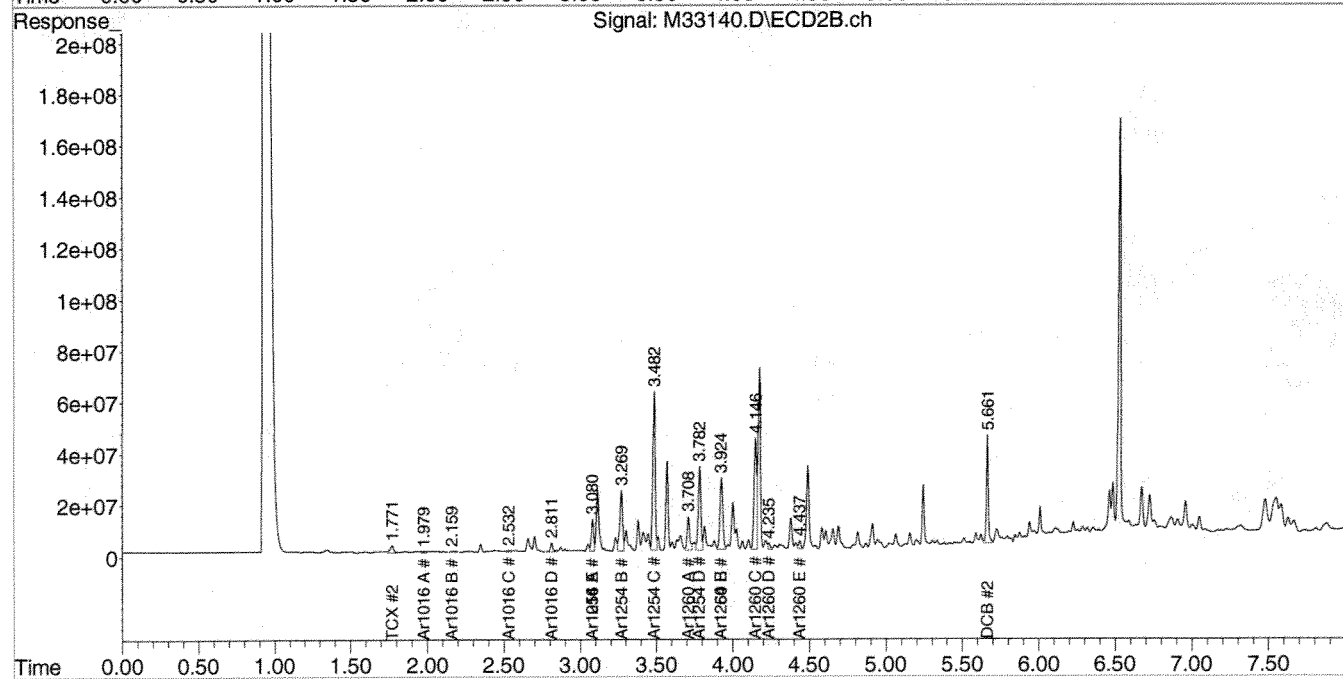
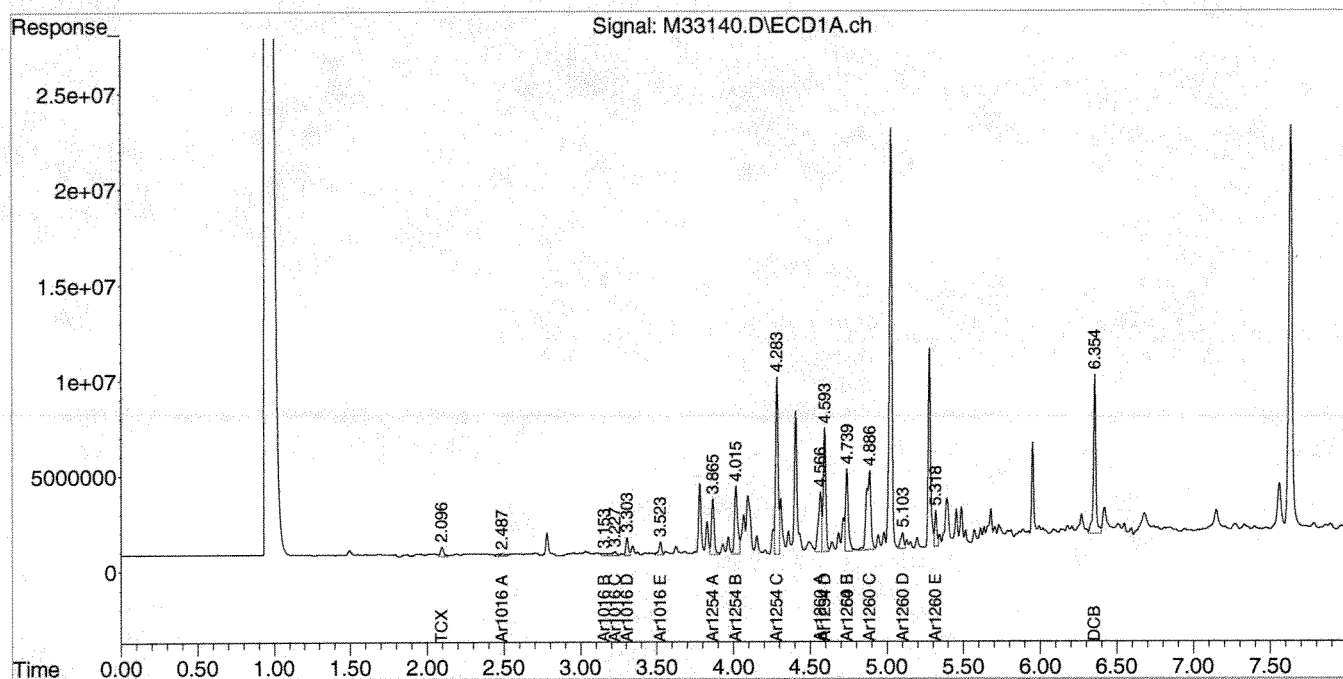
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111210-M\
Data File : M33140.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2010 12:30 pm
Operator : JK
Sample : 68266-6,1:20,,A/C
Misc : SOIL
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 14:53:18 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBS-019

Lab Sample ID: 68266-7
Matrix: Solid
Percent Solid: 82
Dilution Factor: 58
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	1910	U
PCB-1221	1910	U
PCB-1232	1910	U
PCB-1242	1910	U
PCB-1248	1910	U
PCB-1254	1910	44000
PCB-1260	1910	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M
GC Column #1: STX-CLPesticides I
Column ID: 0.25 mm
GC Column #2: STX-CLPesticides II
Column ID: 0.25 mm

SDG: 68266
Sample: 68266-7,1:50,,A/C
Data File: M33141.D
Dilution Factor: 58.3

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	43971	39322	11.2

Column to be used to flag RPD values greater than QC limit of 40%

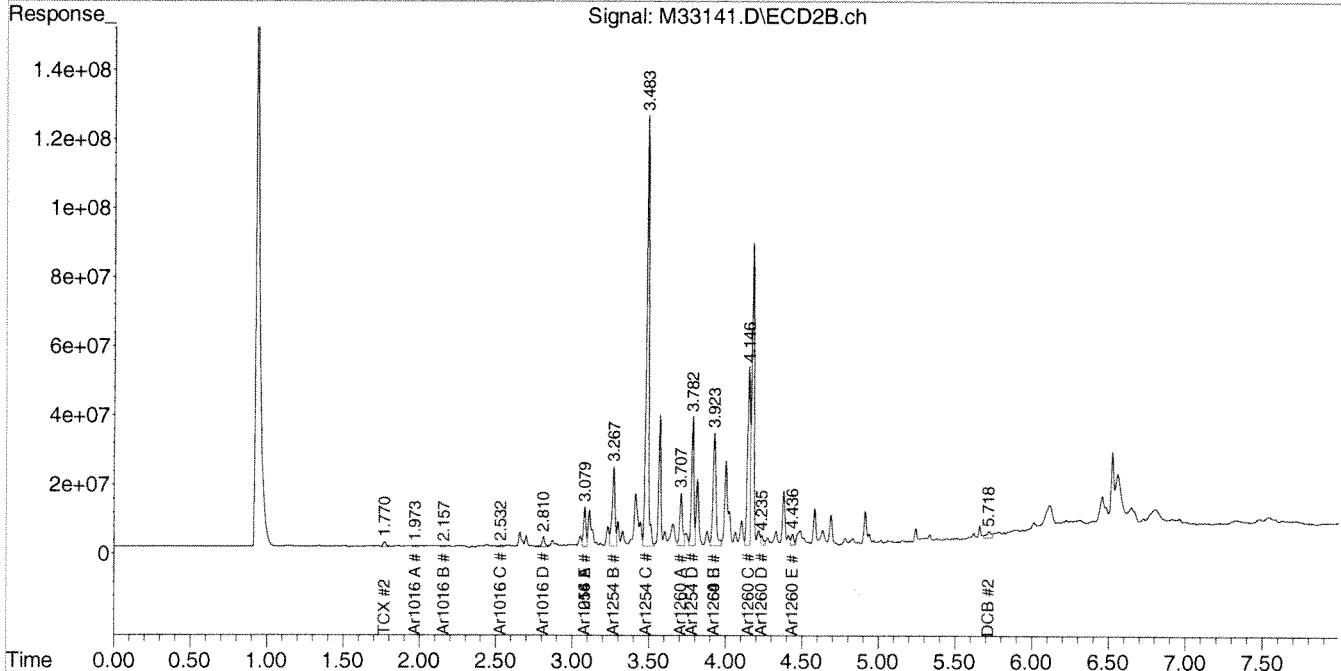
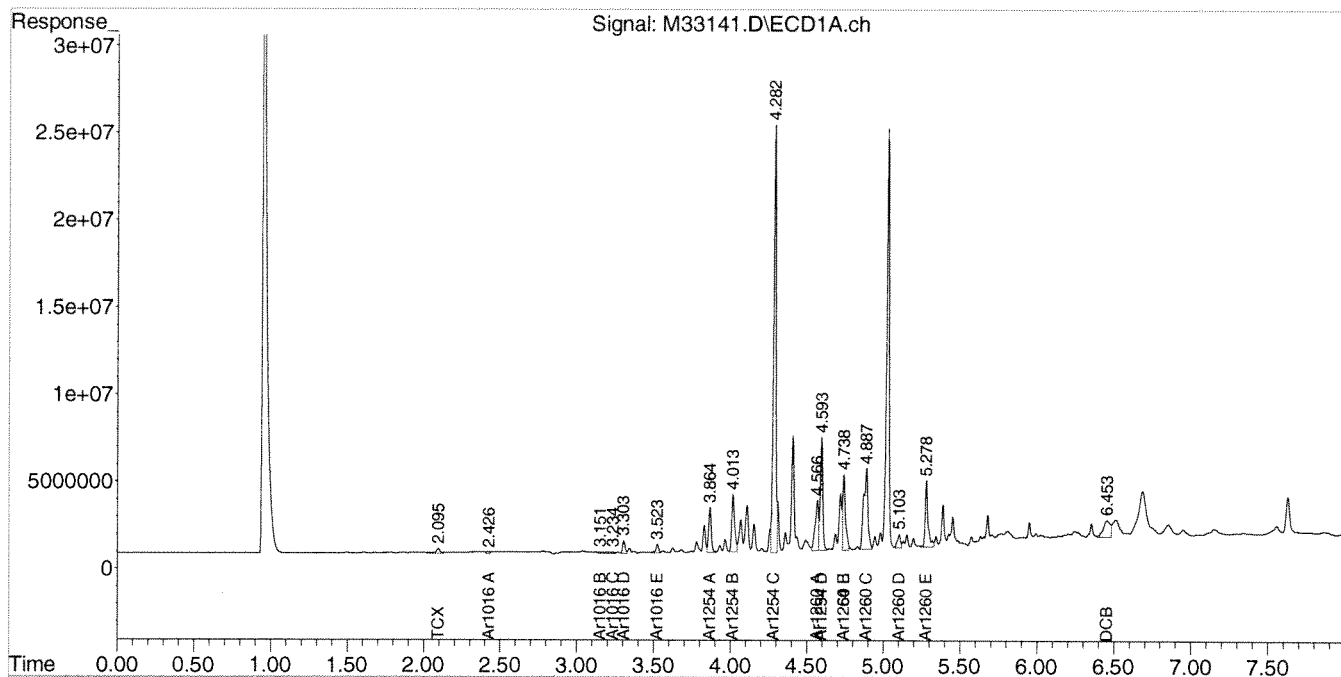
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111210-M\
 Data File : M33141.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2010 12:40 pm
 Operator : JK
 Sample : 68266-7,1:50,,A/C
 Misc : SOIL
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Nov 12 14:56:22 2010
 Quant Method : C:\msdchem\1\METHODS\PCB110310.M
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
 QLast Update : Wed Nov 03 16:47:44 2010
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 2 uL
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBS-020

Lab Sample ID: 68266-8
Matrix: Solid
Percent Solid: 80
Dilution Factor: 60
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	1980	U
PCB-1221	1980	U
PCB-1232	1980	U
PCB-1242	1980	U
PCB-1248	1980	U
PCB-1254	1980	23900
PCB-1260	1980	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68266
GC Column #1: STX-CLPesticides I	Sample: 68266-8,1:50,,A/C
Column ID: 0.25 mm	Data File: M33142.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 59.6
Column ID: 0.25 mm	

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1254	21578	23878	10.1	

Column to be used to flag RPD values greater than QC limit of 40%

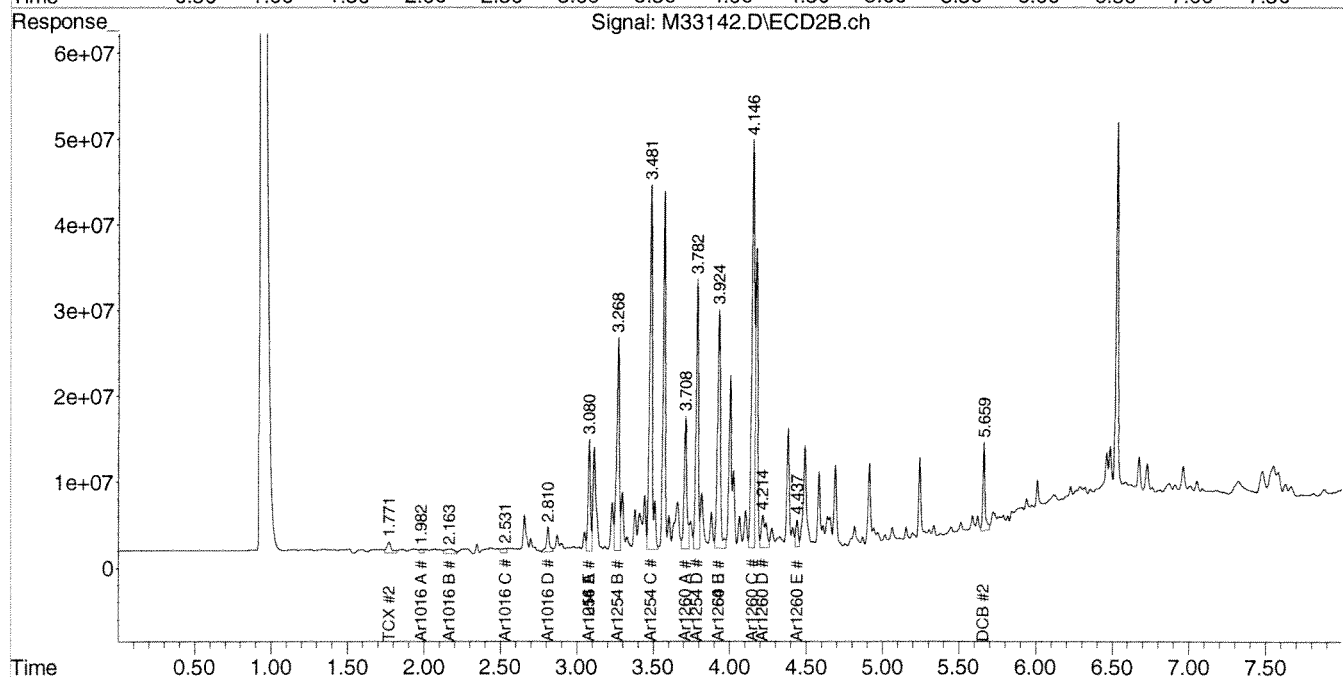
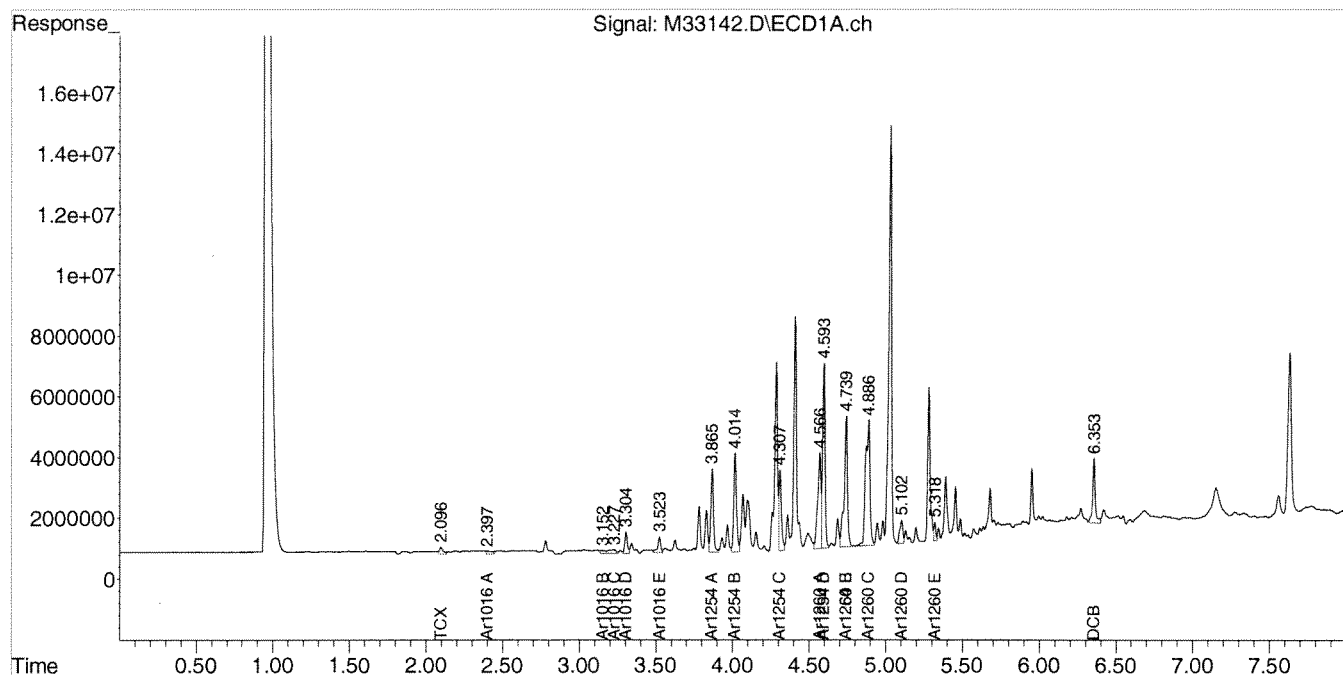
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111210-M\
Data File : M33142.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2010 12:50 pm
Operator : JK
Sample : 68266-8,1:50,,A/C
Misc : SOIL
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 13:05:19 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons

Project Number: 222822

Field Sample ID: UMSC-CBSD-021

Lab Sample ID: 68266-9

Matrix: Solid

Percent Solid: 81

Dilution Factor: 58

Collection Date: 11/04/10

Lab Receipt Date: 11/05/10

Extraction Date: 11/08/10

Analysis Date: 11/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	1910	U
PCB-1221	1910	U
PCB-1232	1910	U
PCB-1242	1910	U
PCB-1248	1910	U
PCB-1254	1910	21000
PCB-1260	1910	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.
* The surrogates were diluted out.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 68266

GC Column #1: STX-CLPesticides I

Sample: 68266-9,1:50,,A/C

Column ID: 0.25 mm

Data File: M33143.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 58.3

Column ID: 0.25 mm

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	19901	21019	5.5

Column to be used to flag RPD values greater than QC limit of 40%

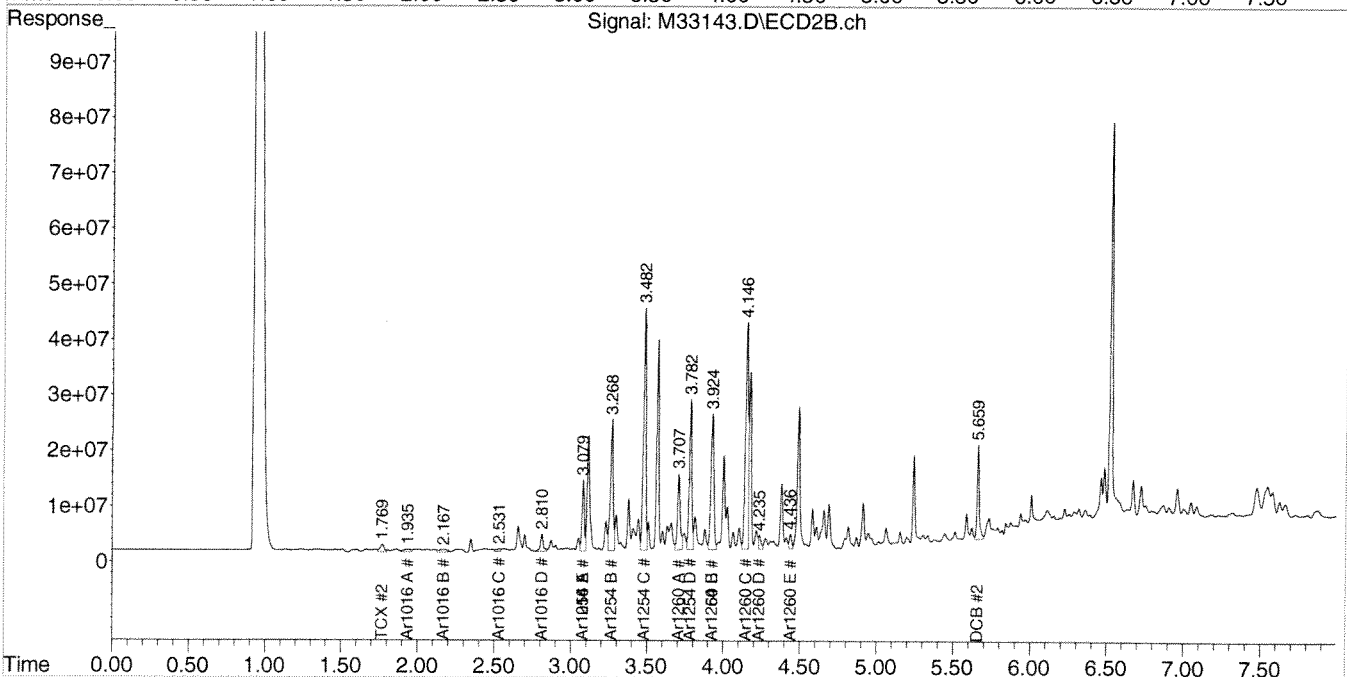
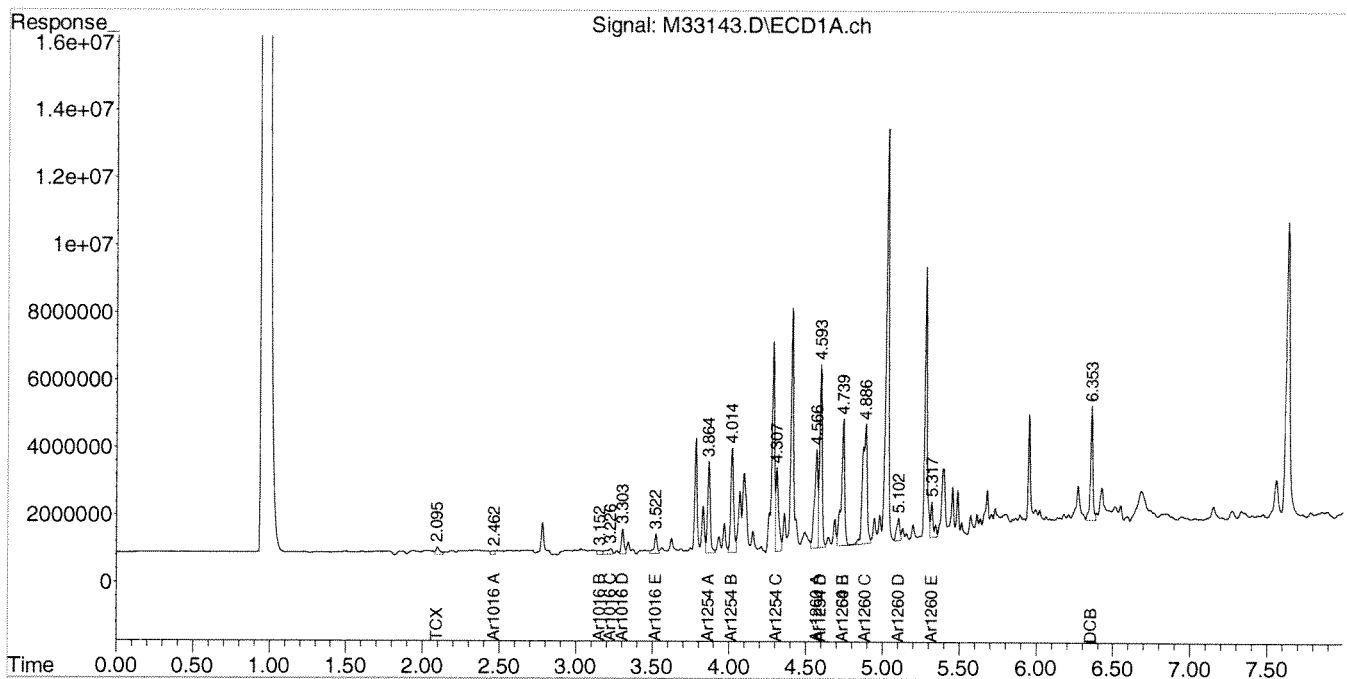
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111210-M\
 Data File : M33143.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2010 1:00 pm
 Operator : JK
 Sample : 68266-9,1:50,,A/C
 Misc : SOIL
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e
 Integration File signal 2: events2.e
 Quant Time: Nov 12 13:11:46 2010
 Quant Method : C:\msdchem\1\METHODS\PCB110310.M
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
 QLast Update : Wed Nov 03 16:47:44 2010
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 2 uL
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBC-022

Lab Sample ID: 68266-10
Matrix: Solid
Percent Solid: 99
Dilution Factor: 10
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/12/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	330	U
PCB-1221	330	U
PCB-1232	330	U
PCB-1242	330	U
PCB-1248	330	U
PCB-1254	330	3250
PCB-1260	330	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	80	%
Decachlorobiphenyl	47	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M
GC Column #1: STX-CLPesticides I
Column ID: 0.25 mm
GC Column #2: STX-CLPesticides II
Column ID: 0.25 mm

SDG: 68266
Sample: 68266-10,1:10,,A/C
Data File: M33136.D
Dilution Factor: 10.0

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1254	3246	3184	1.9	

Column to be used to flag RPD values greater than QC limit of 40%

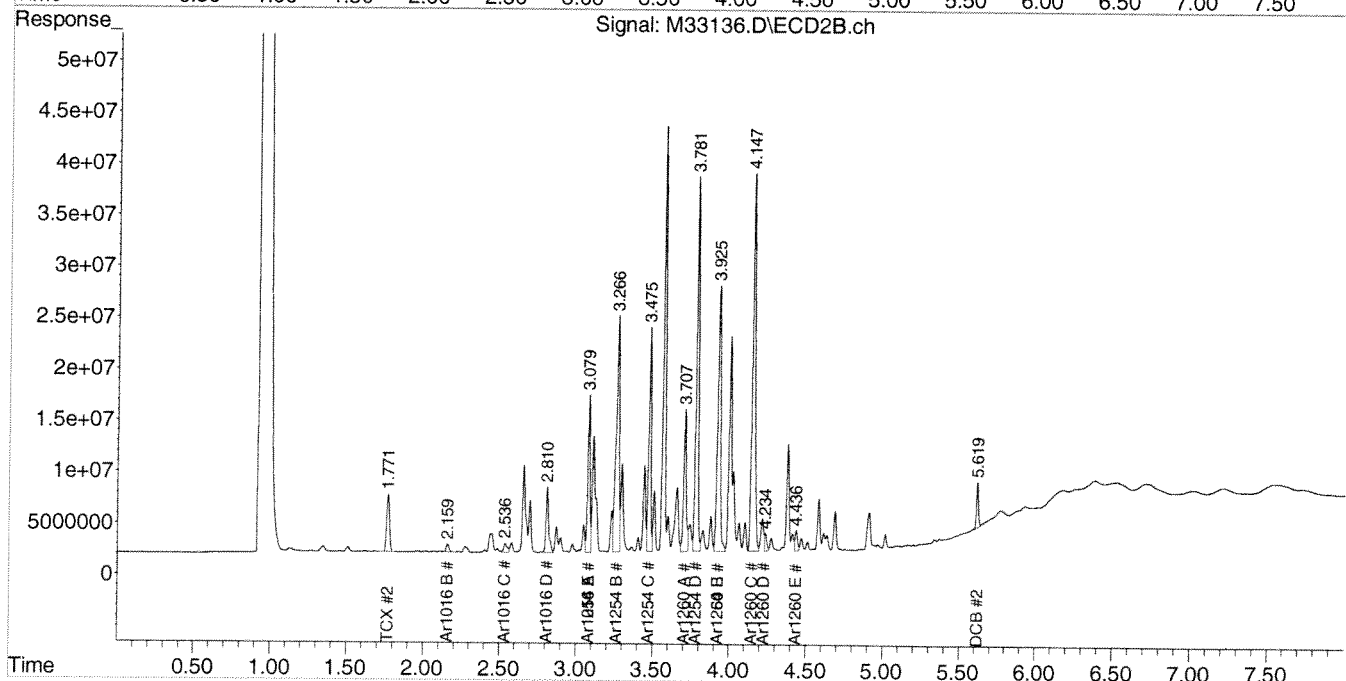
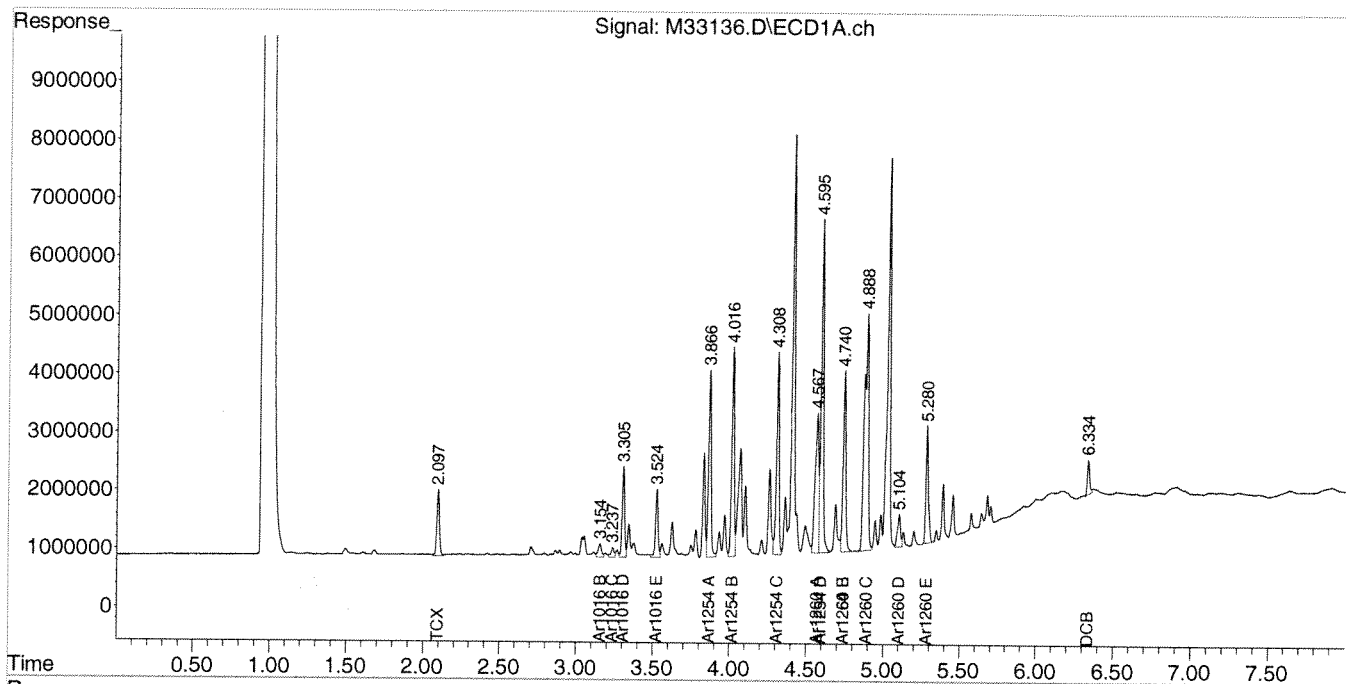
* Values outside QC limits

Comments: _____

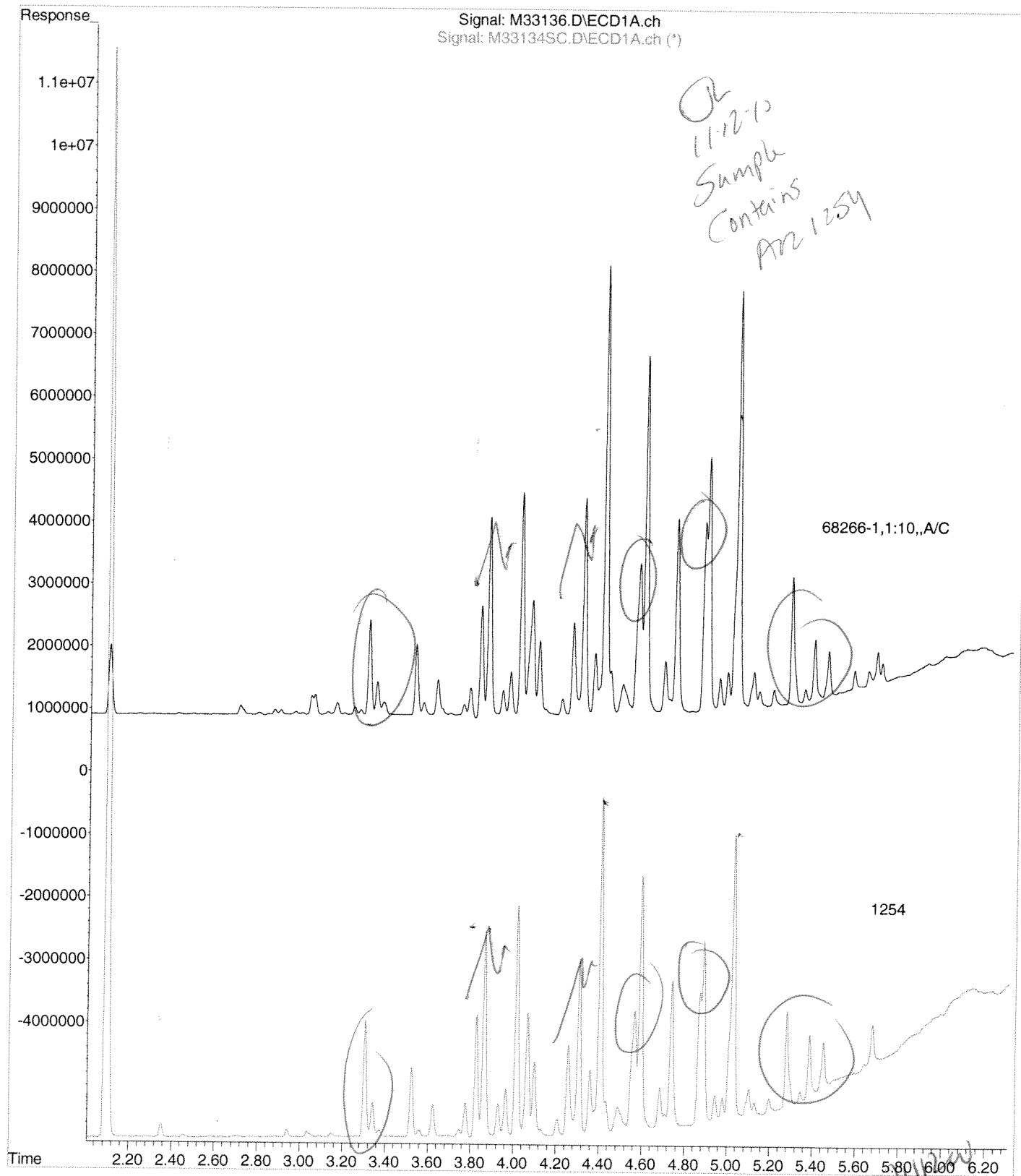
Data Path : C:\msdchem\1\DATA\111210-M\
Data File : M33136.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2010 11:49 am
Operator : JK
Sample : 68266-10,1:10,,A/C
Misc : SOIL
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 12:26:41 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\111210-M\M33136.D
Operator : JK
Acquired : 12 Nov 2010 11:49 am using AcqMethod PEST.M
Instrument : Instrument M
Sample Name: 68266-10,1:10,,A/C
Misc Info : SOIL
Vial Number: 7



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBC-025

Lab Sample ID: 68266-11
Matrix: Solid
Percent Solid: 100
Dilution Factor: 1.0
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	391
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	67	%
Decachlorobiphenyl	43	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68266
GC Column #1: STX-CLPesticides I	Sample: 68266-11,,A/C
Column ID: 0.25 mm	Data File: M33099.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 1.0
Column ID: 0.25 mm	

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	391	348	11.5

Column to be used to flag RPD values greater than QC limit of 40%

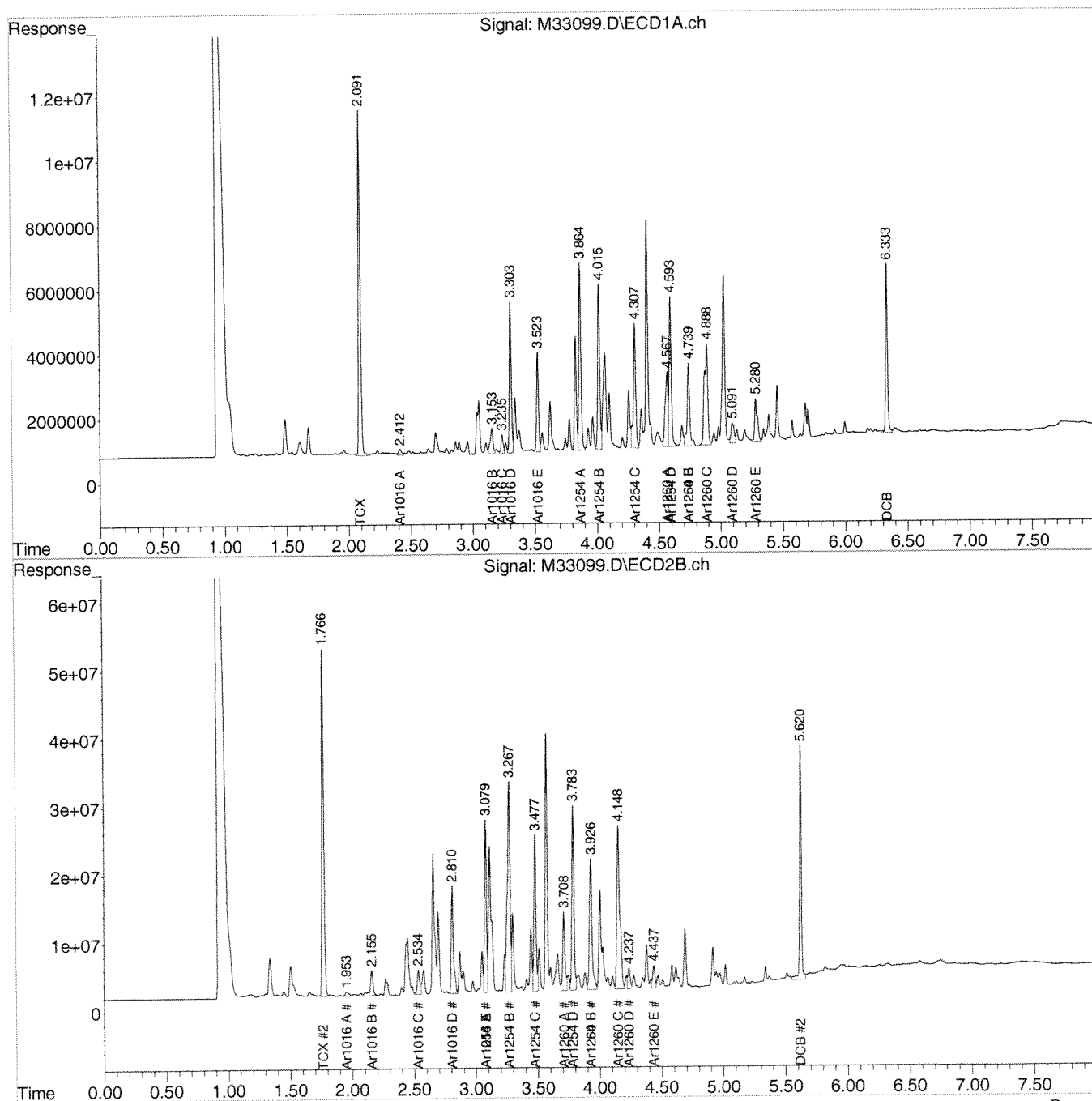
* Values outside QC limits

Comments: _____

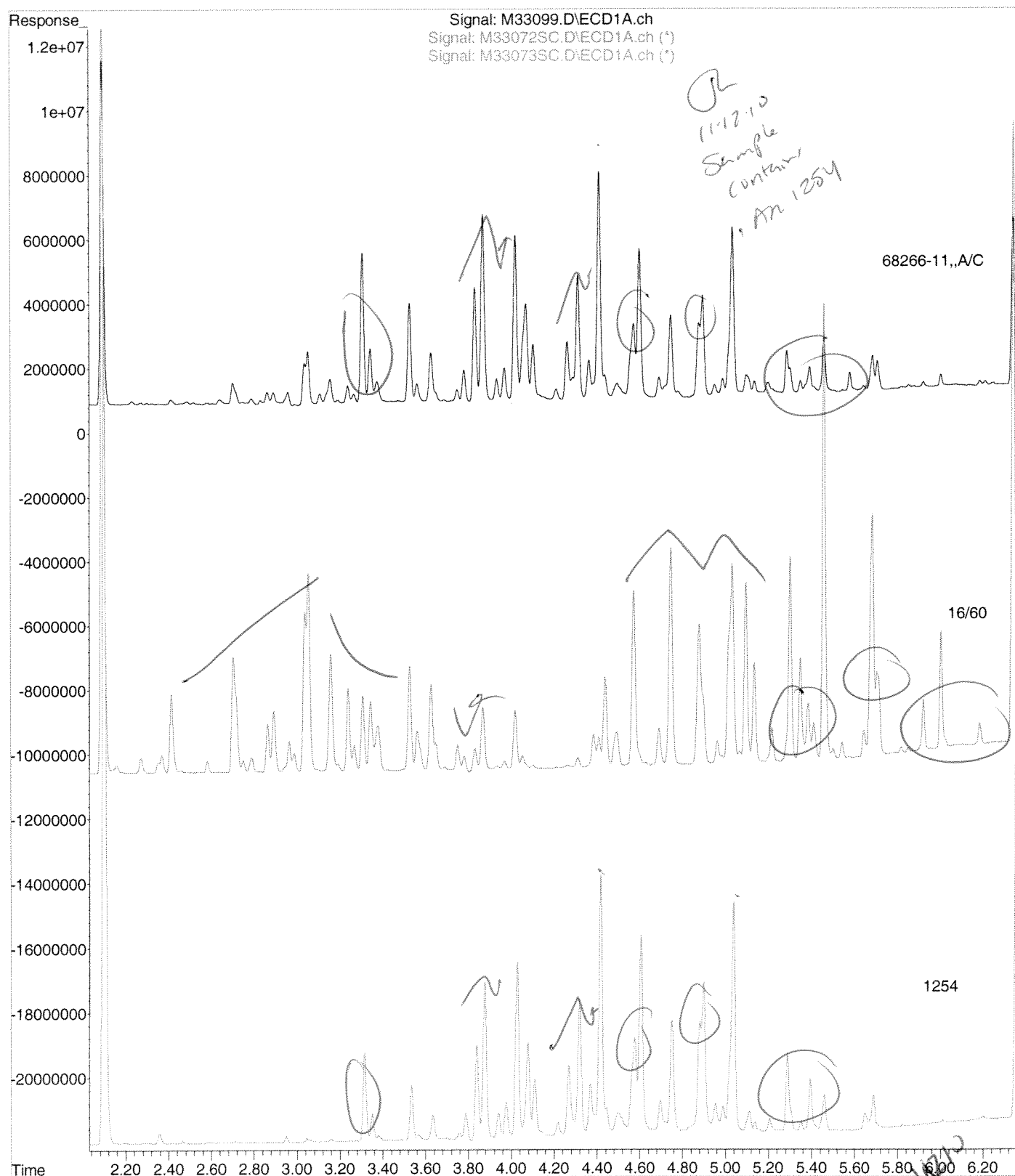
Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33099.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 4:27 pm
Operator : JK
Sample : 68266-11,,A/C
Misc : SOIL
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:41:30 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0.25 um Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\111110-M\M33099.D
Operator : JK
Acquired : 11 Nov 2010 4:27 pm using AcqMethod PEST.M
Instrument : Instrument M
Sample Name: 68266-11,,A/C
Misc Info : SOIL
Vial Number: 12



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November 12, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBC-027

Lab Sample ID: 68266-12
Matrix: Solid
Percent Solid: 99
Dilution Factor: 1.0
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	735
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	81	%
Decachlorobiphenyl	53	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68266
GC Column #1: STX-CLPesticides I	Sample: 68266-12,,A/C
Column ID: 0.25 mm	Data File: M33100.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 1.0
Column ID: 0.25 mm	

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	735	644	13.2

Column to be used to flag RPD values greater than QC limit of 40%

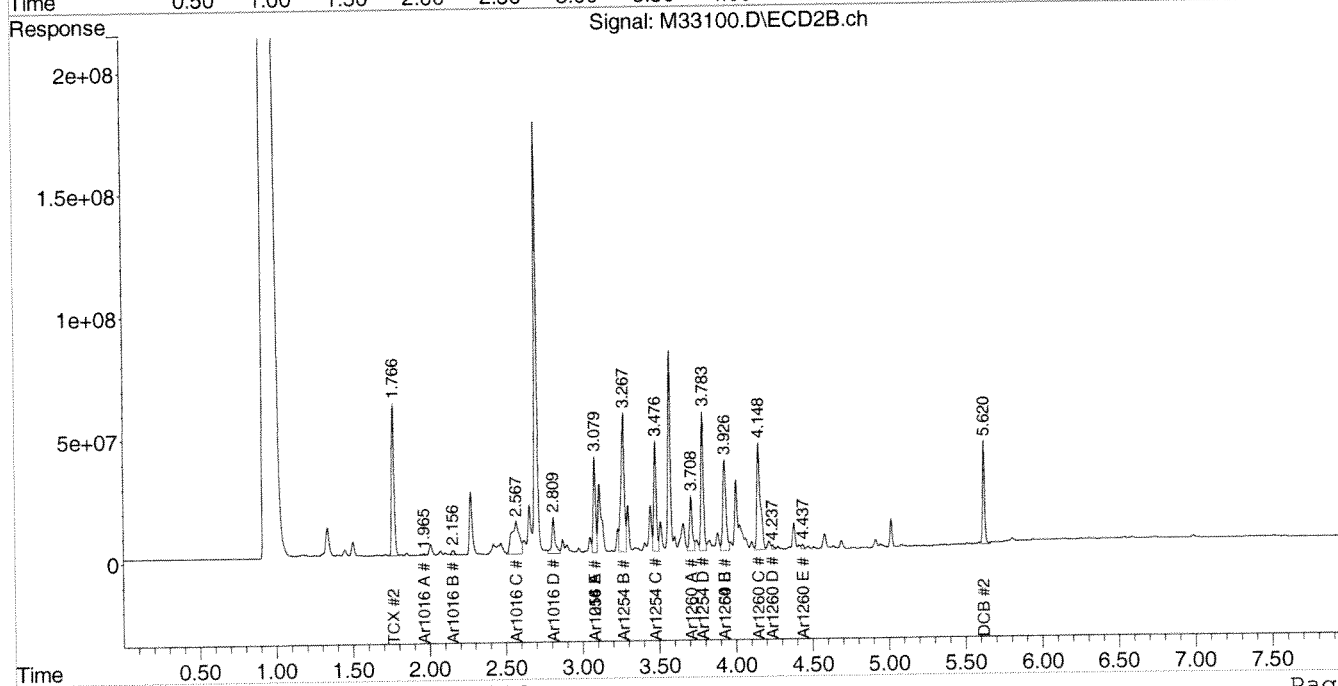
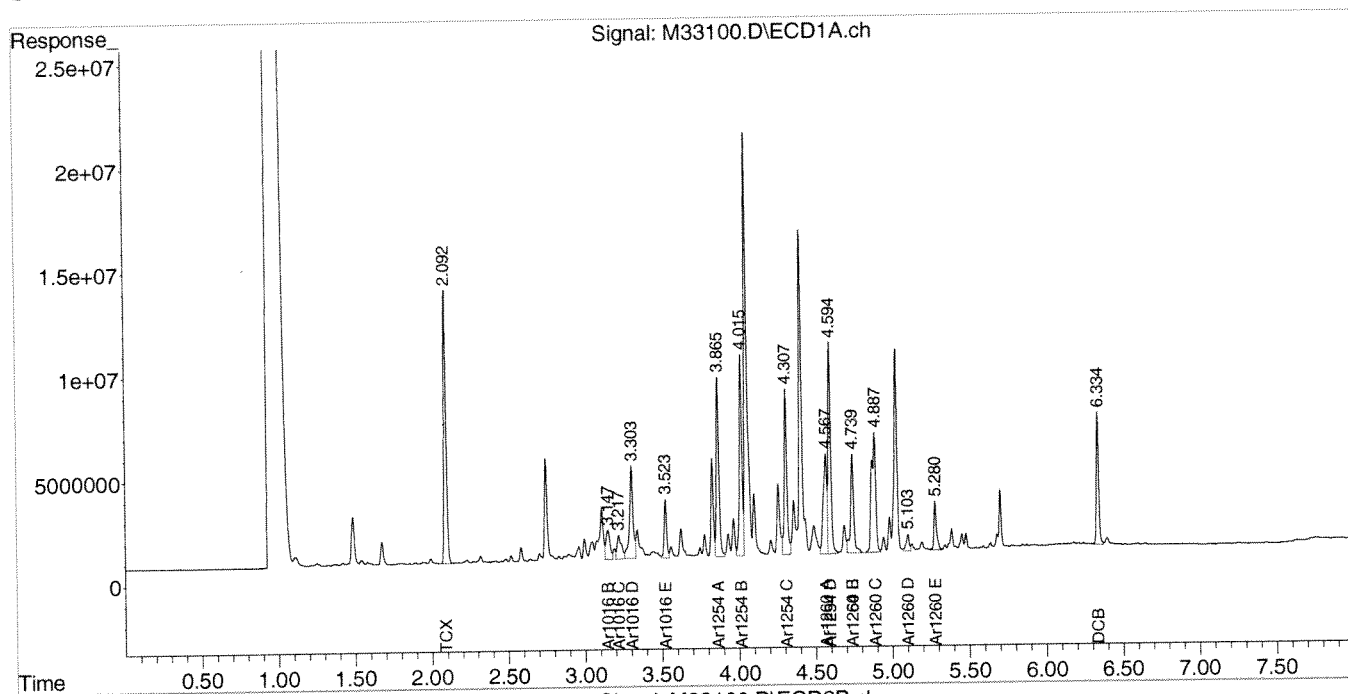
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33100.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 4:37 pm
Operator : JK
Sample : 68266-12,,A/C
Misc : SOIL
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:43:07 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0.25 um Signal #2 Info : 30 m x 0.25mm x 0.25 um



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November 12, 2010

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBB-028

SAMPLE DATA

Lab Sample ID: 68266-13
Matrix: Solid
Percent Solid: 93
Dilution Factor: 1.1
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	36	U
PCB-1221	36	U
PCB-1232	36	U
PCB-1242	36	U
PCB-1248	36	U
PCB-1254	36	369
PCB-1260	36	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	85	%
Decachlorobiphenyl	57	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.



PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 68266

GC Column #1: STX-CLPesticides I

Sample: 68266-13,,A/C

Column ID: 0.25 mm

Data File: M33101.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.1

Column ID: 0.25 mm

Column #1		Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	346	369	6.5	

Column to be used to flag RPD values greater than QC limit of 40%

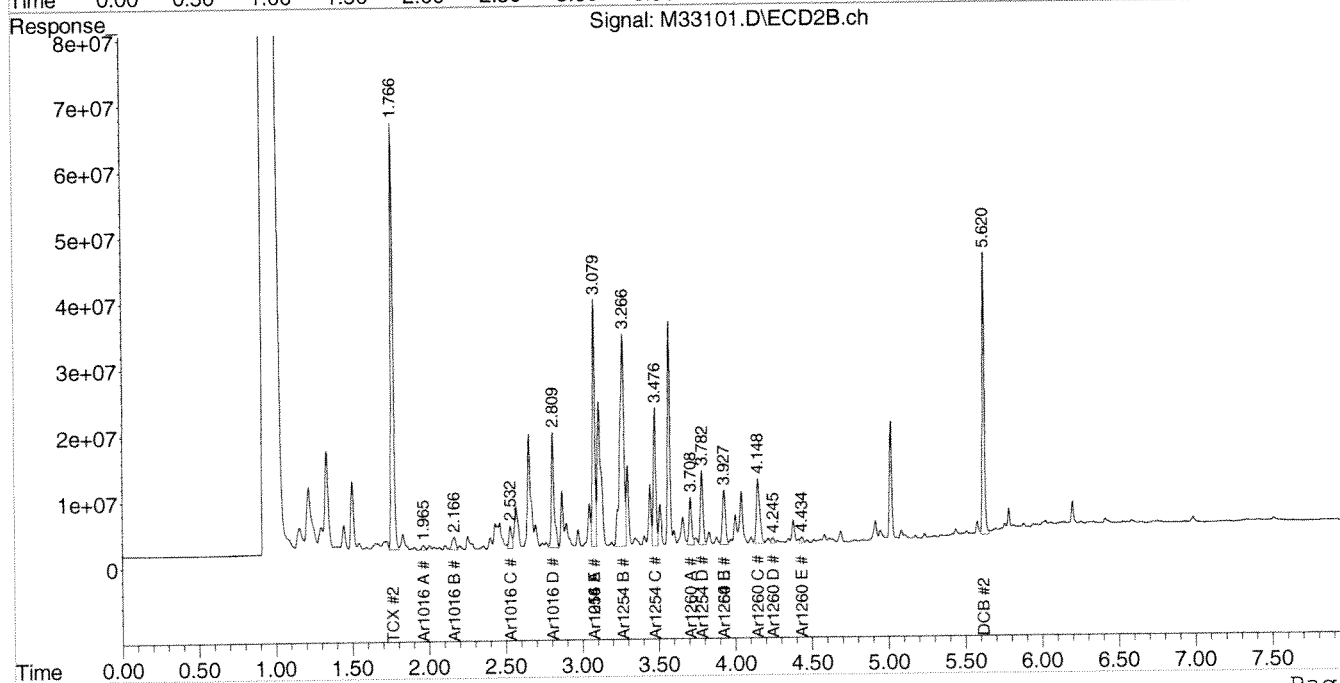
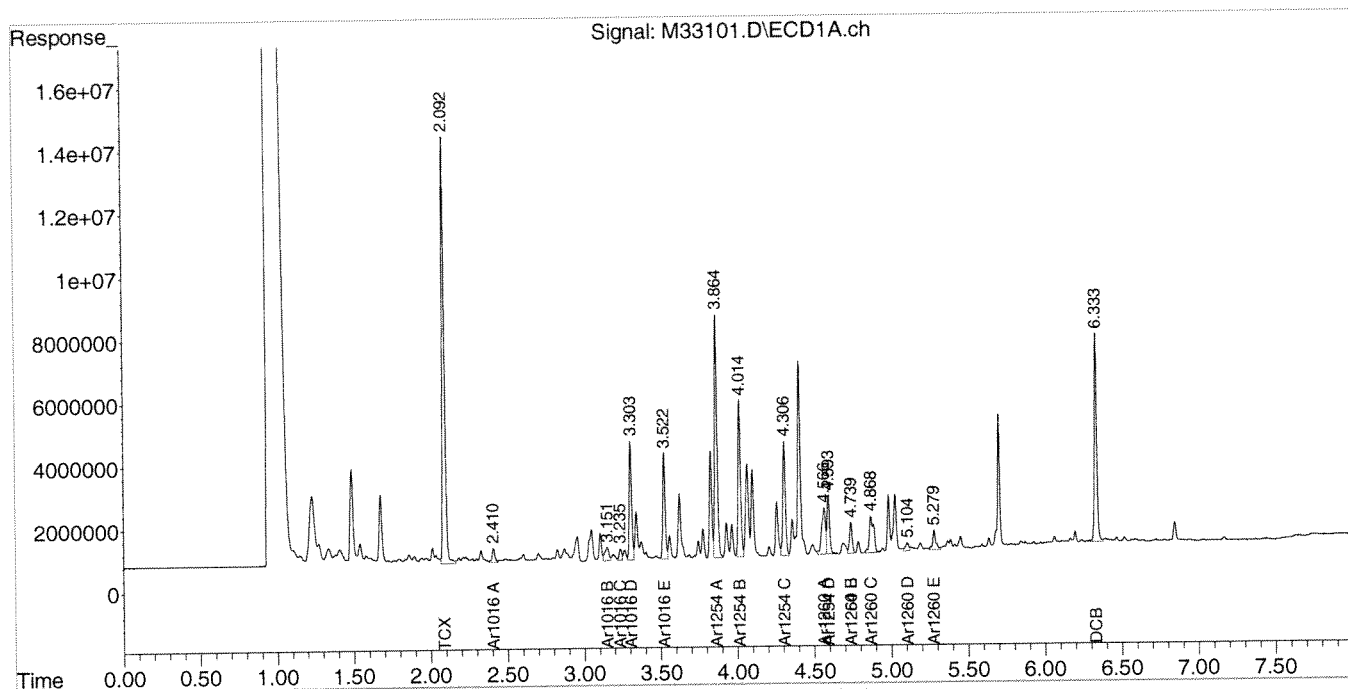
* Values outside QC limits

Comments: _____

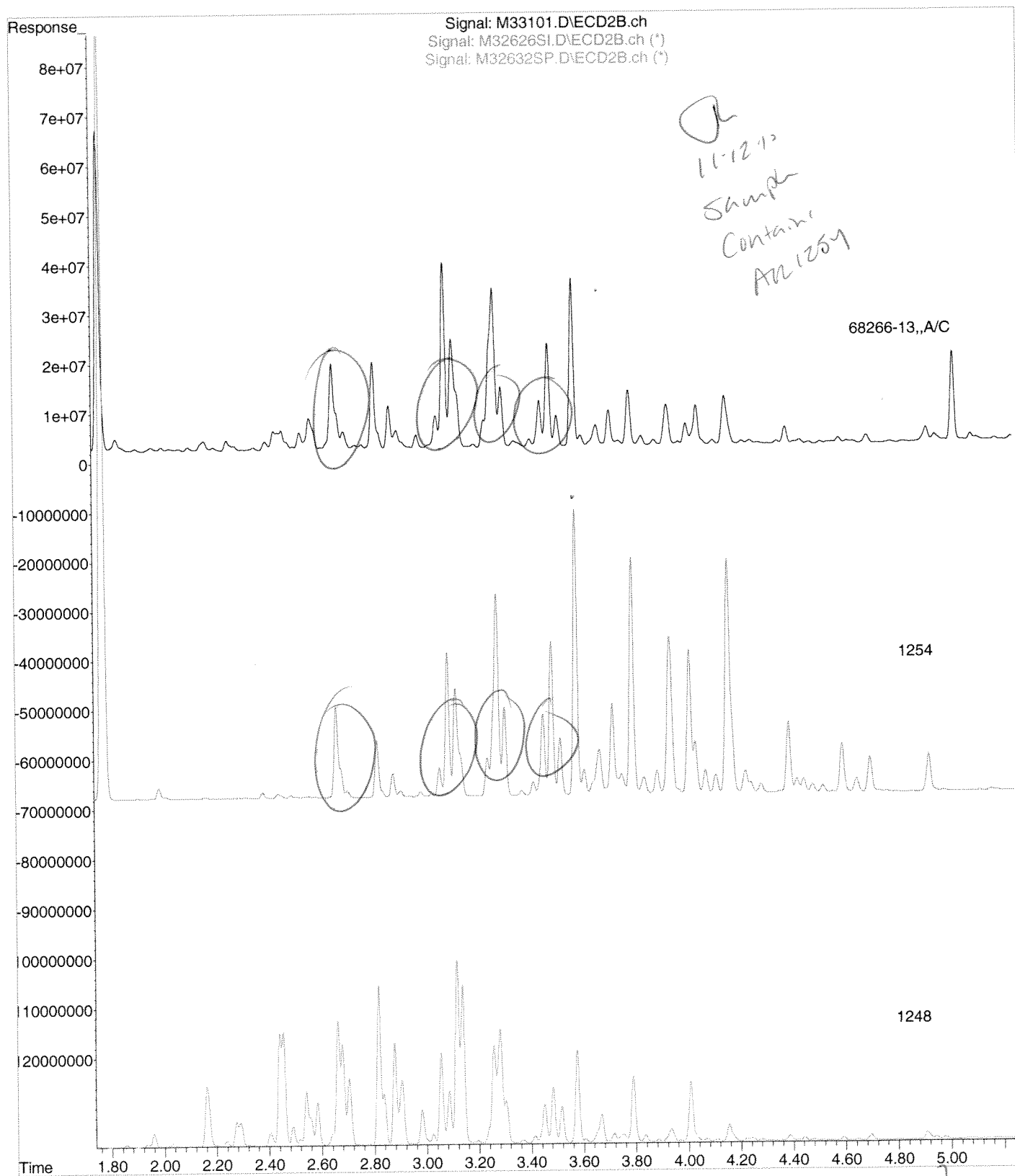
Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33101.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 4:48 pm
Operator : JK
Sample : 68266-13,,A/C
Misc : SOIL
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:43:53 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0.25 um Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\111110-M\M33101.D
Operator : JK
Acquired : 11 Nov 2010 4:48 pm using AcqMethod PEST.M
Instrument : Instrument M
Sample Name: 68266-13,,A/C
Misc Info : SOIL
Vial Number: 14



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBB-029

Lab Sample ID: 68266-14
Matrix: Solid
Percent Solid: 95
Dilution Factor: 1.0
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	355
PCB-1260	33	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	91	%
Decachlorobiphenyl	59	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68266
GC Column #1: STX-CLPesticides I	Sample: 68266-14,,A/C
Column ID: 0.25 mm	Data File: M33102.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 1.0
Column ID: 0.25 mm	

Column #1		Column #2		RPD	#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1254	352	355		0.9	

Column to be used to flag RPD values greater than QC limit of 40%

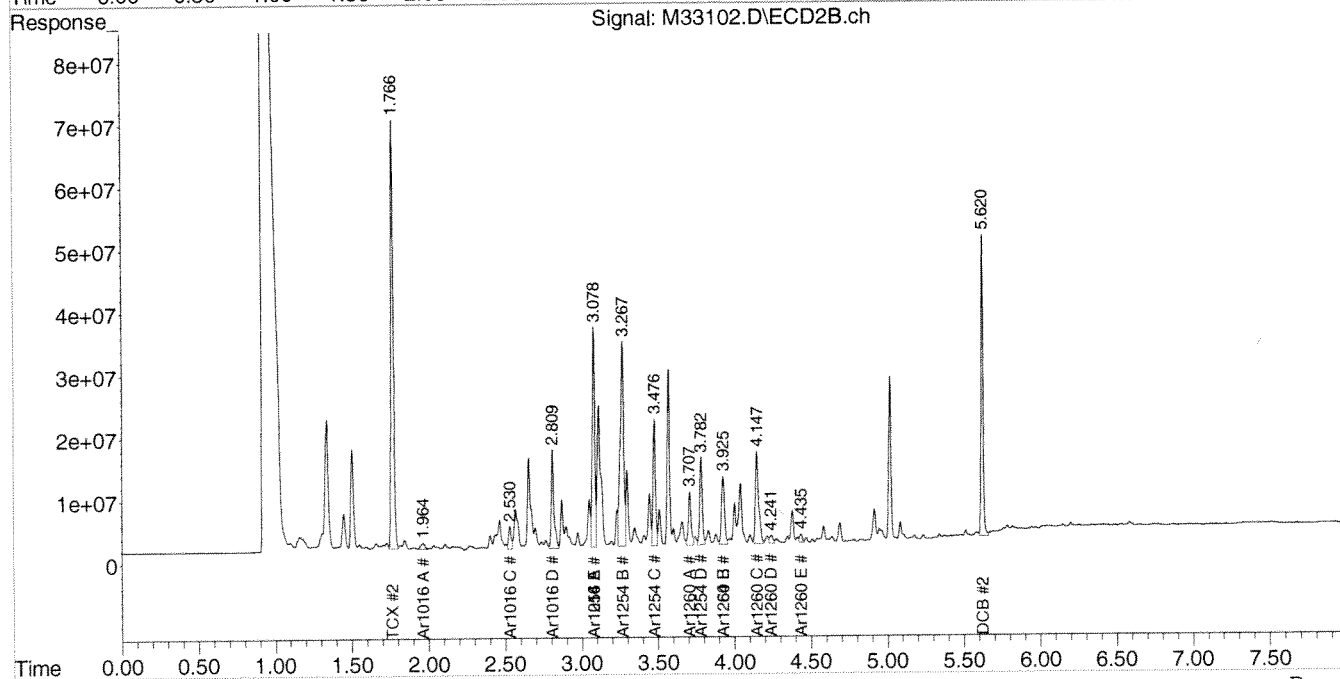
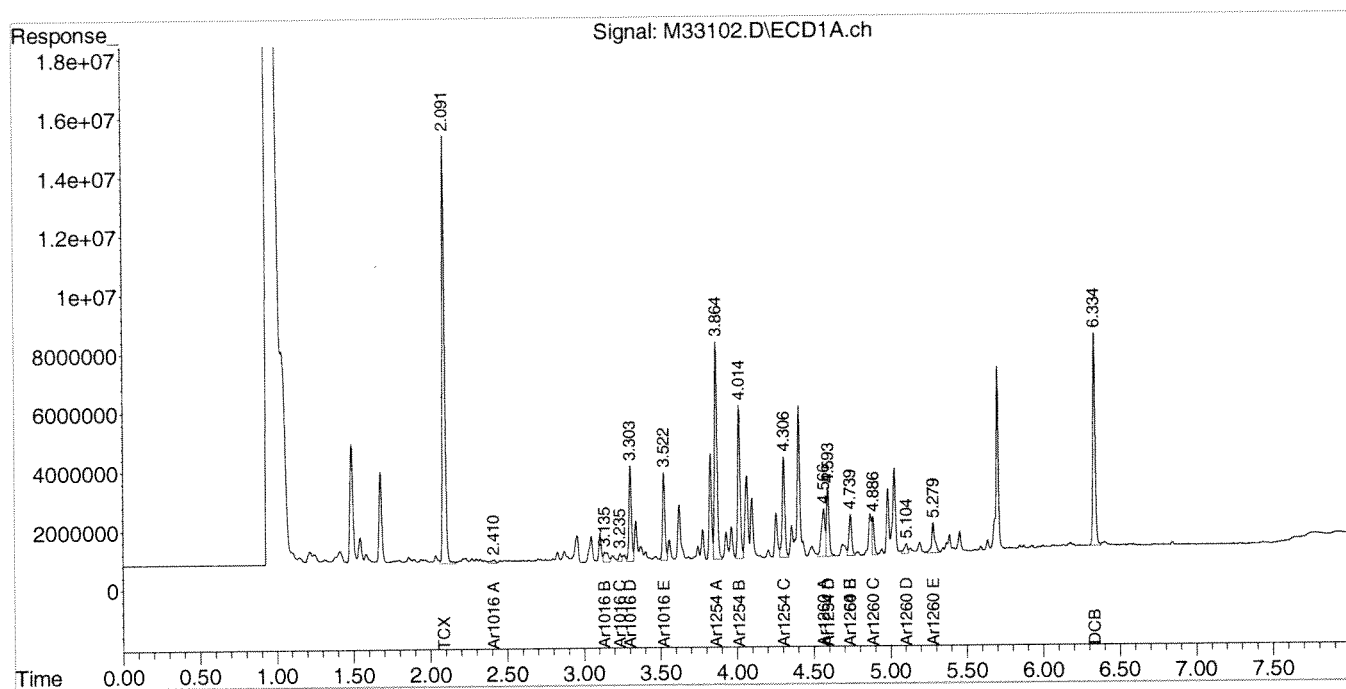
* Values outside QC limits

Comments: _____

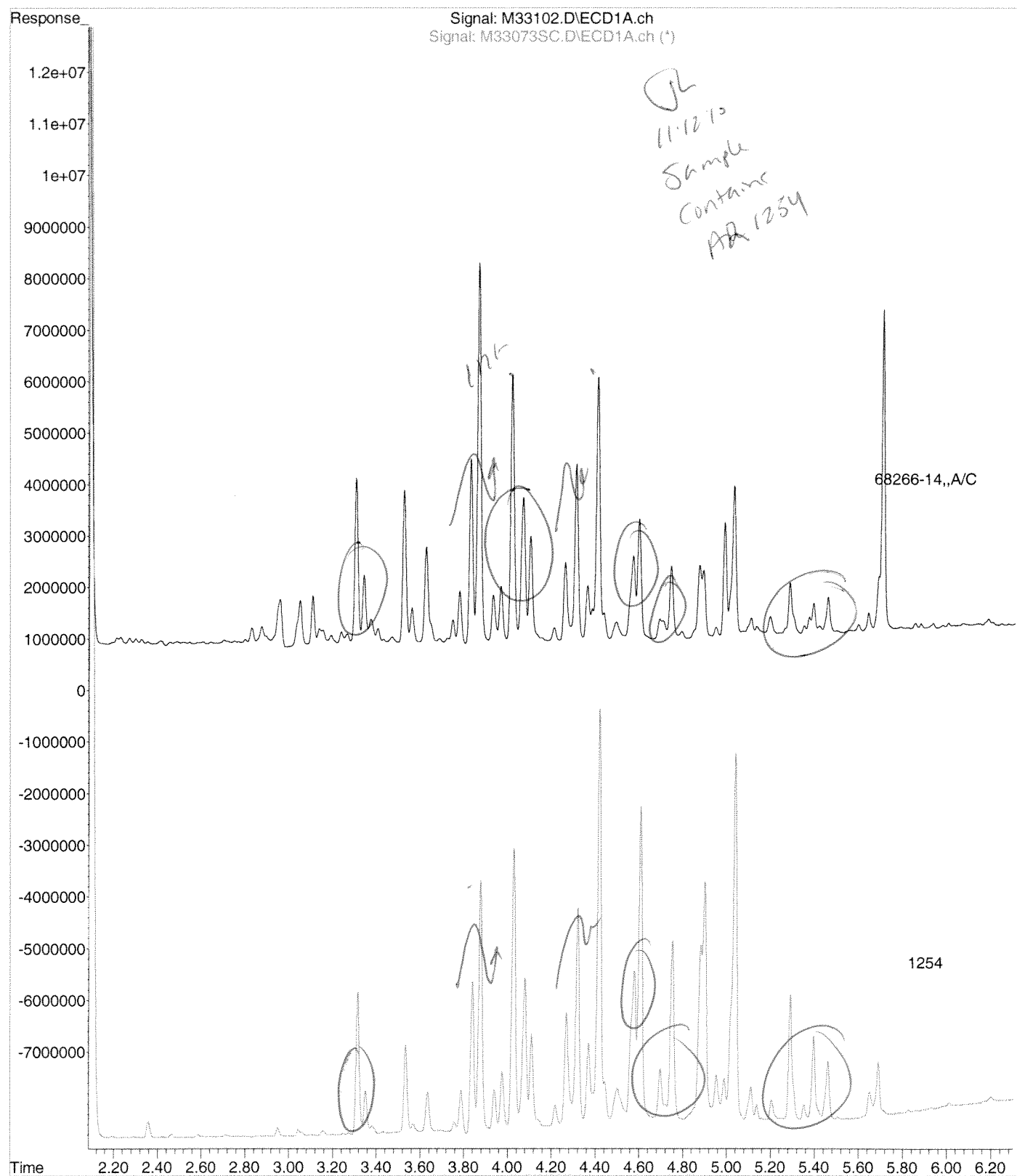
Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33102.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 4:58 pm
Operator : JK
Sample : 68266-14,,A/C
Misc : SOIL
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:45:20 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\111110-M\M33102.D
Operator : JK
Acquired : 11 Nov 2010 4:58 pm using AcqMethod PEST.M
Instrument : Instrument M
Sample Name: 68266-14,,A/C
Misc Info : SOIL
Vial Number: 15



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CWG-030

Lab Sample ID: 68266-15
Matrix: Wipe
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/wipe}$	Results $\mu\text{g/wipe}$
PCB-1016	0.5	U
PCB-1221	0.5	U
PCB-1232	0.5	U
PCB-1242	0.5	U
PCB-1248	0.5	U
PCB-1254	0.5	U
PCB-1260	0.5	0.9
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	92	%
Decachlorobiphenyl	58	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS:

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68266
GC Column #1: STX-CLPesticides I	Sample: 68266-15,,A/C
Column ID: 0.25 mm	Data File: M33087.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 1.0
Column ID: 0.25 mm	

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/wipe)	SAMPLE RESULT (ug/wipe)	RPD #
PCB 1254	0.9	0.9	4.2

Column to be used to flag RPD values greater than QC limit of 40%

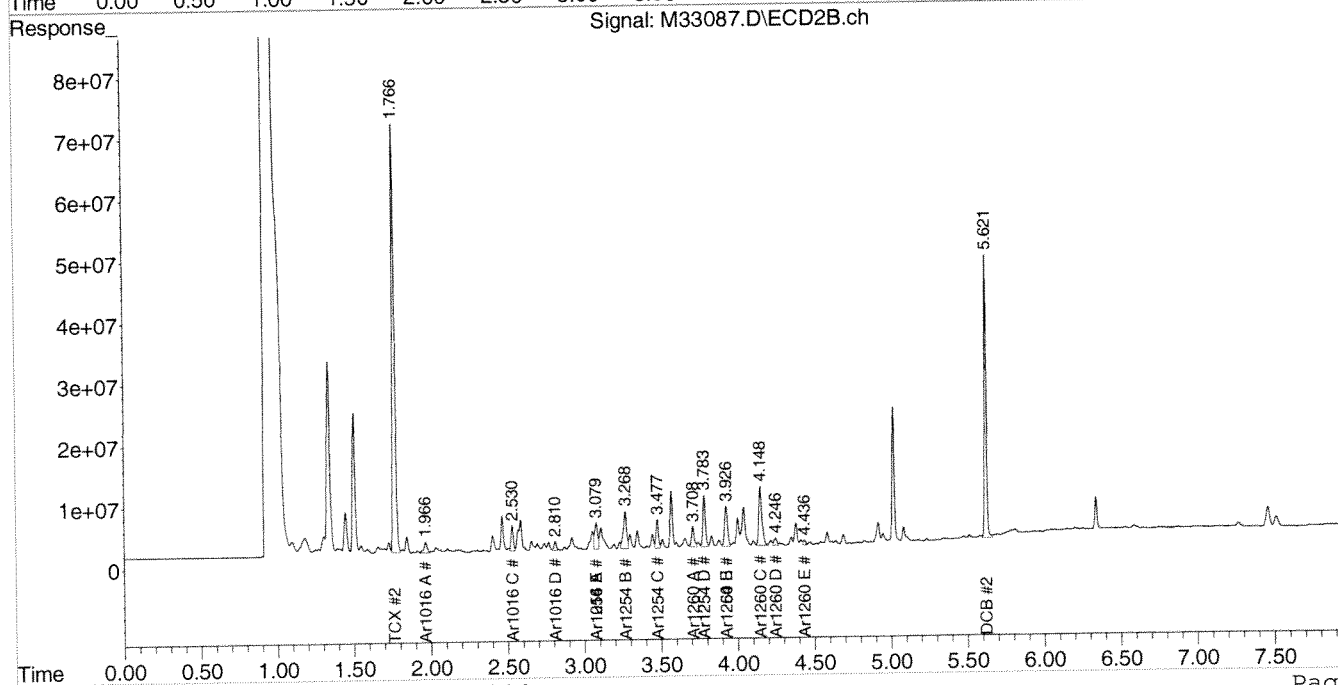
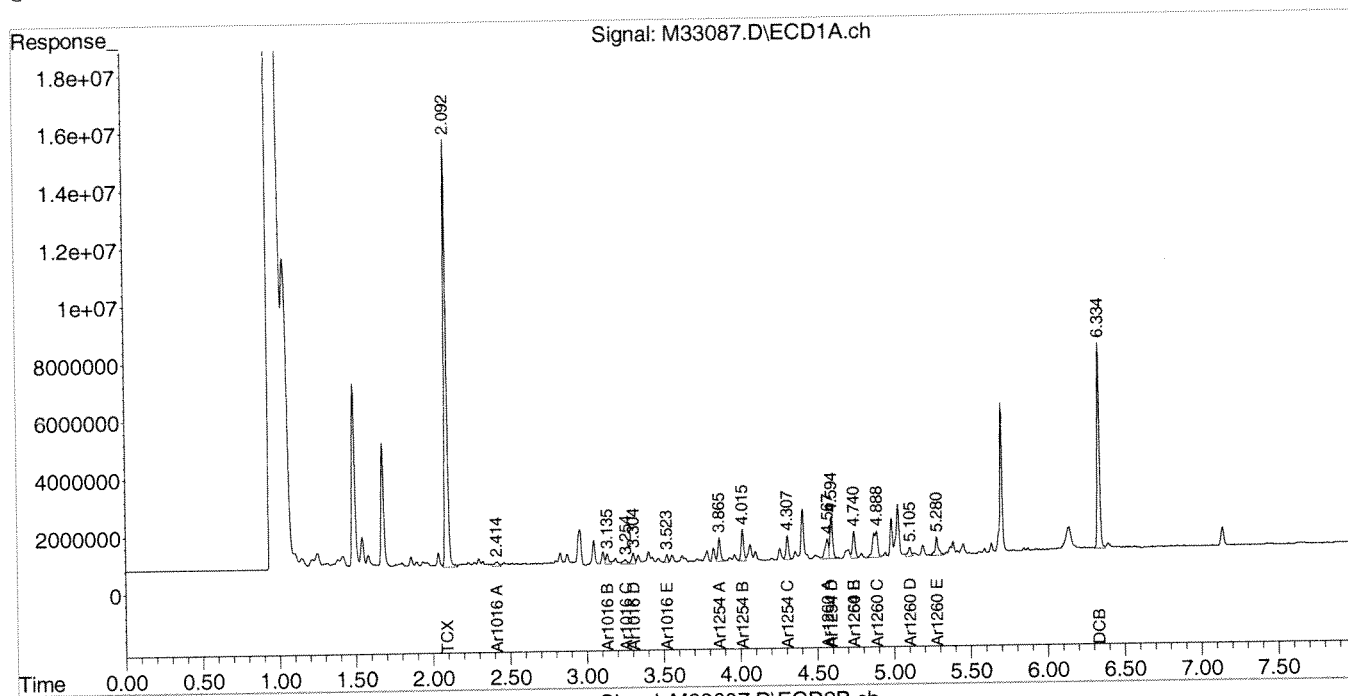
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33087.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 2:16 pm
Operator : JK
Sample : 68266-15,,A/C
Misc : SOIL
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:17:36 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0.25 um Signal #2 Info : 30 m x 0.25mm x 0.25 um



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CWG-031

Lab Sample ID: 68266-16
Matrix: Wipe
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/wipe}$	Results $\mu\text{g/wipe}$
PCB-1016	0.5	U
PCB-1221	0.5	U
PCB-1232	0.5	U
PCB-1242	0.5	U
PCB-1248	0.5	U
PCB-1254	0.5	U
PCB-1260	0.5	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	94	%
Decachlorobiphenyl	59	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS:

PCB Report

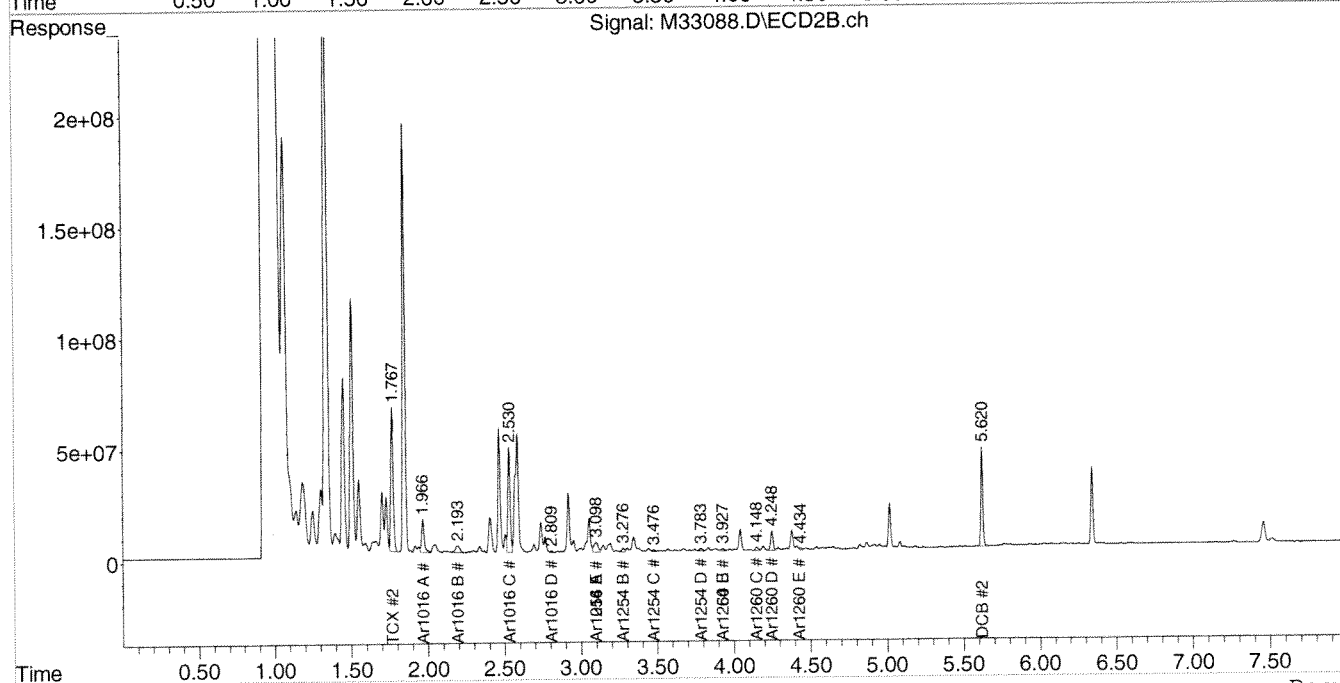
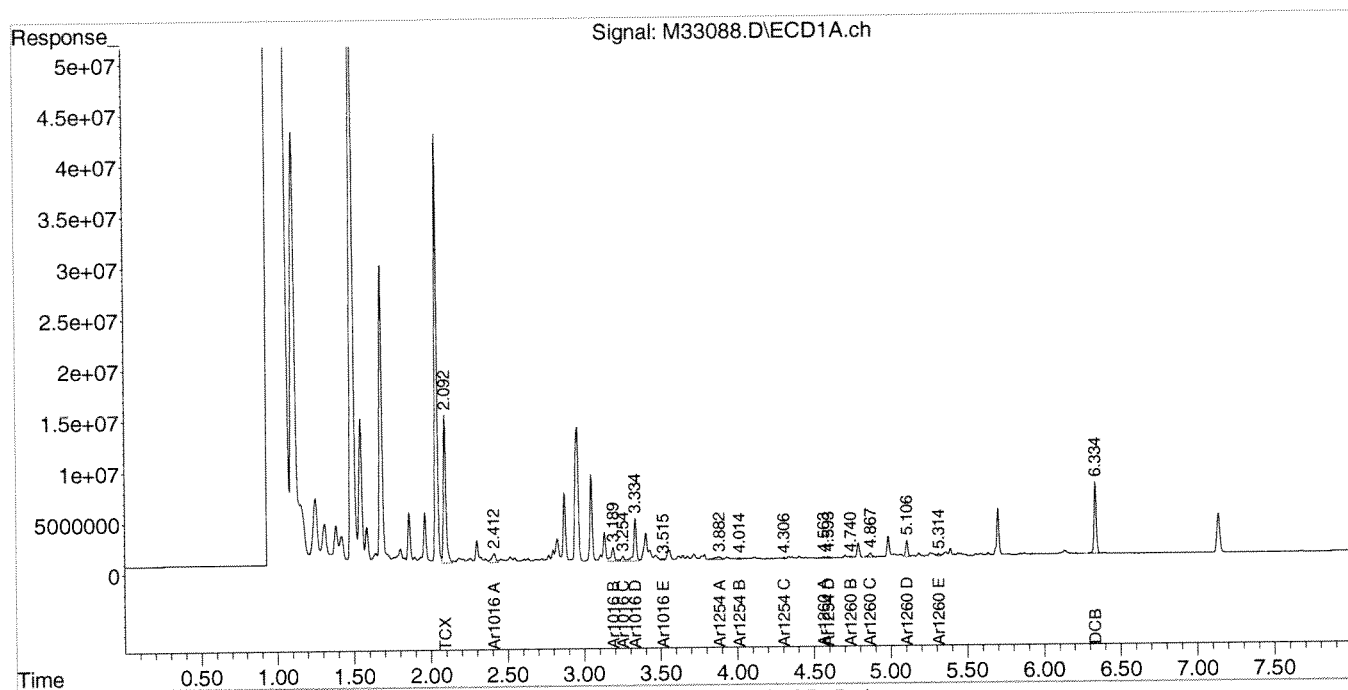
Authorized signature



Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33088.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 2:27 pm
Operator : JK
Sample : 68266-16,,A/C
Misc : SOIL
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:19:23 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0.25 um Signal #2 Info : 30 m x 0.25mm x 0.25 um



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November 12, 2010

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CWG-032

Lab Sample ID: 68266-17
Matrix: Wipe
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 11/04/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/08/10
Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/wipe}$	Results $\mu\text{g/wipe}$
PCB-1016	0.5	U
PCB-1221	0.5	U
PCB-1232	0.5	U
PCB-1242	0.5	U
PCB-1248	0.5	U
PCB-1254	0.5	U
PCB-1260	0.5	0.9
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	99	%
Decachlorobiphenyl	60	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS:

PCB Report

Authorized signature



PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M
GC Column #1: STX-CLPesticides I
Column ID: 0.25 mm
GC Column #2: STX-CLPesticides II
Column ID: 0.25 mm

SDG: 68266
Sample: 68266-17,,A/C
Data File: M33089.D
Dilution Factor: 1.0

Column #1		Column #2		RPD	#
COMPOUND	SAMPLE RESULT (ug/wipe)	SAMPLE RESULT (ug/wipe)			
PCB 1254	0.7	0.9		25.2	

Column to be used to flag RPD values greater than QC limit of 40%

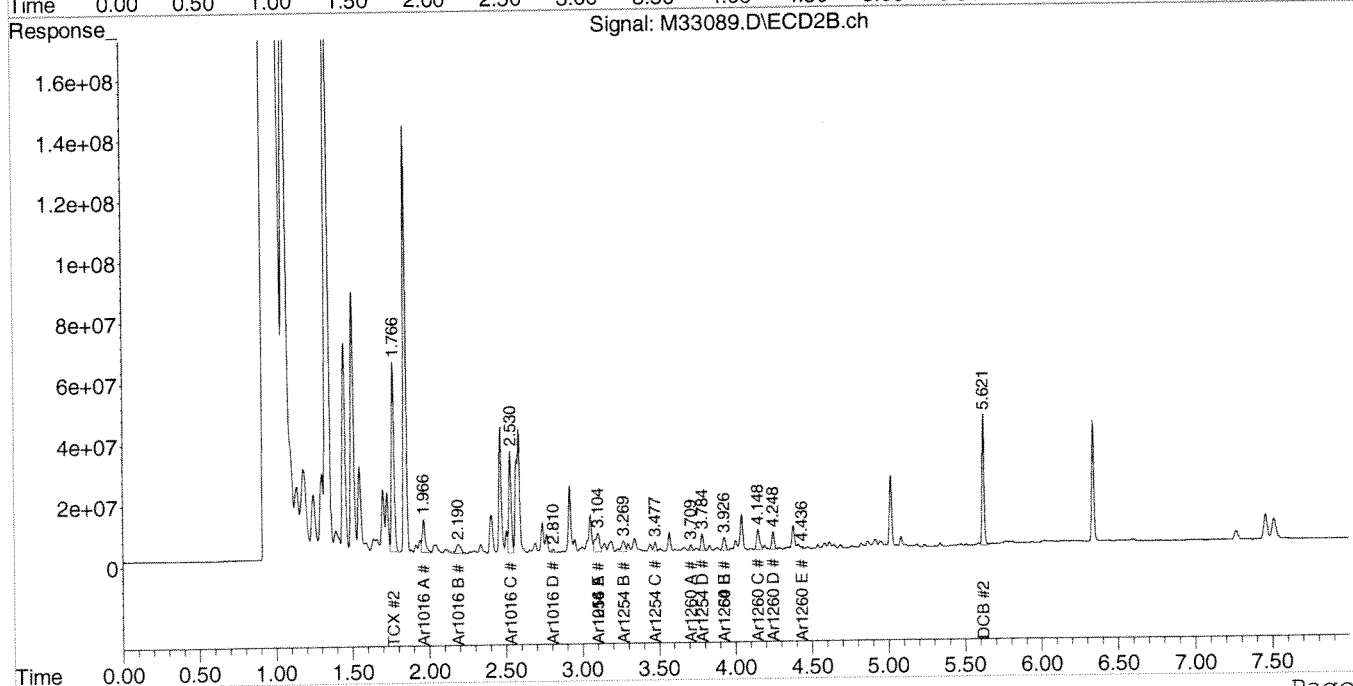
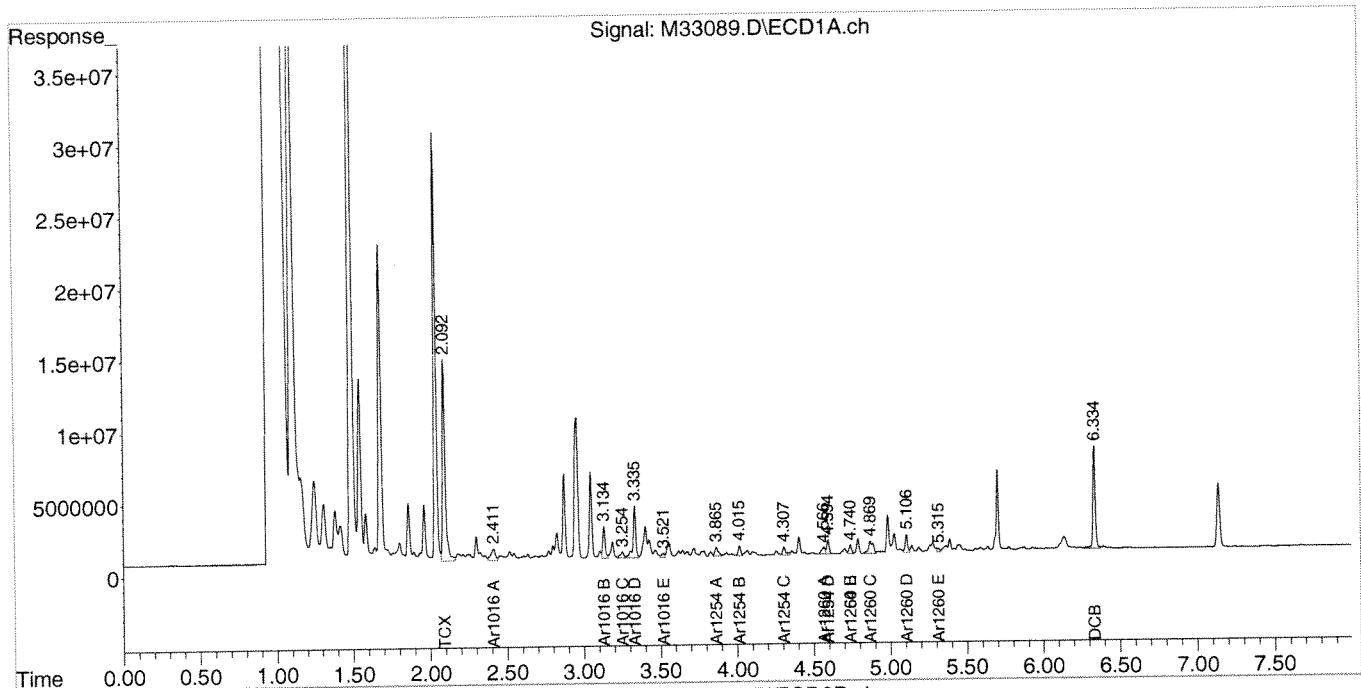
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33089.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 2:37 pm
Operator : JK
Sample : 68266-17,,A/C
Misc : SOIL
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:20:03 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0.25 um Signal #2 Info : 30 m x 0.25mm x 0.25 um



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SAMPLE DATA

CLIENT SAMPLE ID

Project Name: UMaine Stewart Commons

Project Number: 222822

Field Sample ID: UMSC-CWG-033

Lab Sample ID: 68266-18

Matrix: Wipe

Percent Solid: N/A

Dilution Factor: 1.0

Collection Date: 11/04/10

Lab Receipt Date: 11/05/10

Extraction Date: 11/08/10

Analysis Date: 11/11/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/wipe	Results µg/wipe
PCB-1016	0.5	U
PCB-1221	0.5	U
PCB-1232	0.5	U
PCB-1242	0.5	U
PCB-1248	0.5	U
PCB-1254	0.5	U
PCB-1260	0.5	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	105	%
Decachlorobiphenyl	71	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

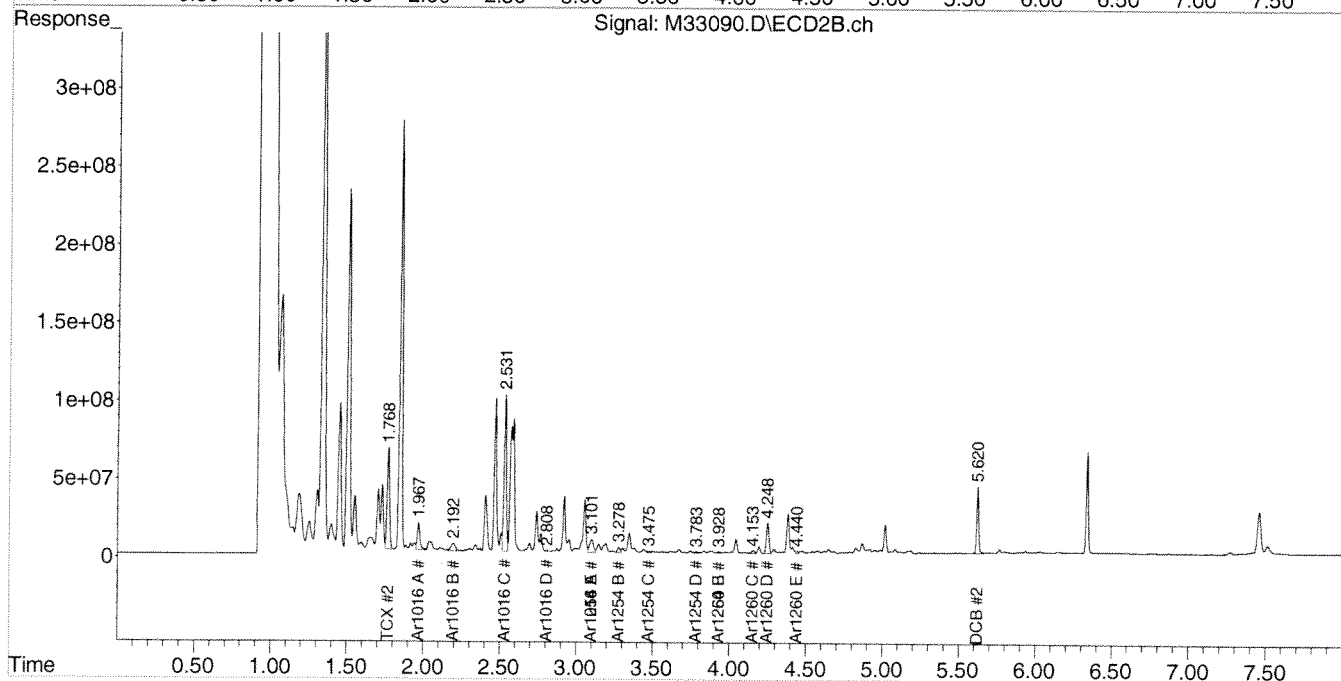
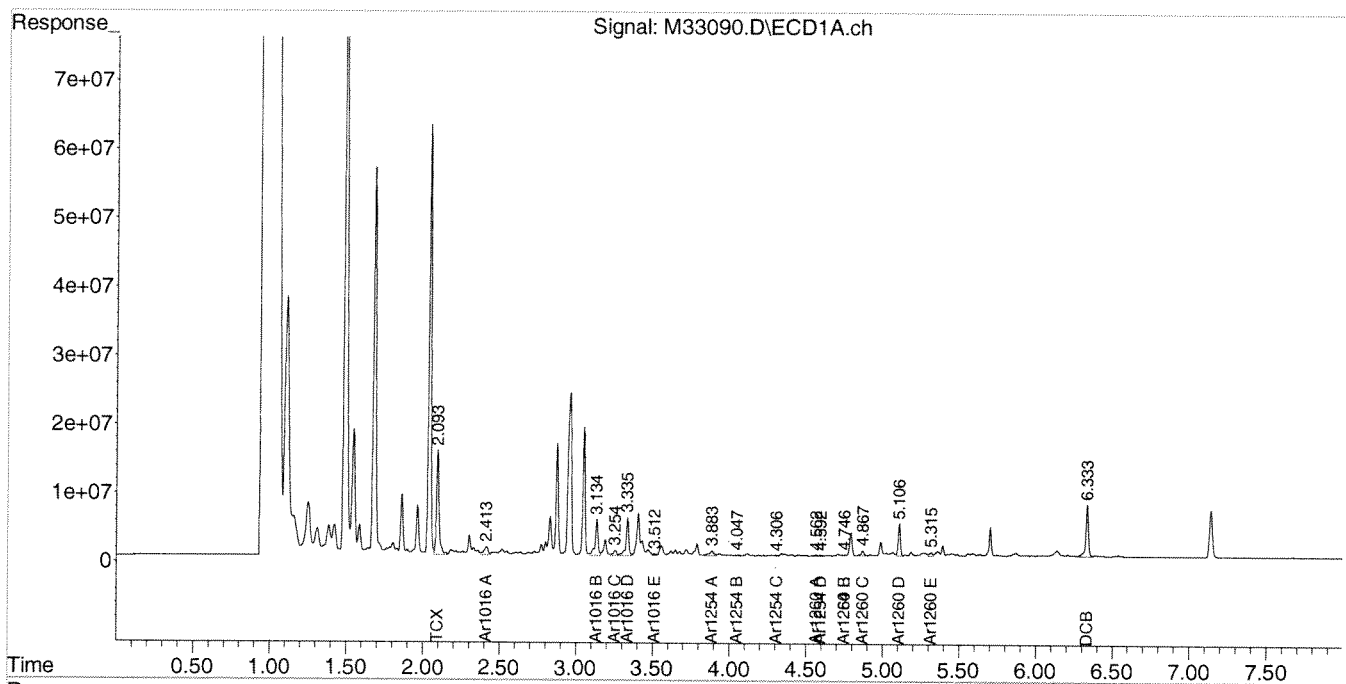
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS:

Data Path : C:\msdchem\1\DATA\111110-M\
Data File : M33090.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 11 Nov 2010 2:47 pm
Operator : JK
Sample : 68266-18,,A/C
Misc : SOIL
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 12 09:23:21 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



PCB QC FORMS

PCB WIPE
LABORATORY CONTROL SAMPLE/DUPLICATE
PERCENT RECOVERY

Instrument ID: M

GC Column #1: STX-CLPesticides I

Column ID: 0.25 mm

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

SDG: 68266

Non-spiked sample: B110810PSOX,,A/C

Spike: L110810PSOXW,,A/C

Spike duplicate: LD110810PSOXW,,A/C

COMPOUND	LCS SPIKE	LCSD SPIKE	LOWER	UPPER	RPD	NON-SPIKE	SPIKE		SPIKE		SPIKE DUP		SPIKE DUP		RPD	
	ADDED (ug/wipe)	ADDED (ug/wipe)	LIMIT	LIMIT	LIMIT	RESULT (ug/wipe)	RESULT (ug/wipe)	% REC	#	RESULT (ug/wipe)	% REC	#	RPD	#		
PCB 1016	2.0	2.0	65	140	30	0	2.2	111		2.5	123		10.1			
PCB 1260	2.0	2.0	60	130	30	0	1.9	96		1.9	96		0.0			
PCB 1016 #2	2.0	2.0	65	140	30	0	2.2	111		2.4	122		9.4			
PCB 1260 #2	2.0	2.0	60	130	30	0	1.6	82		1.7	85		3.7			

Column to be used to flag recovery and RPD values outside of QC limits

* Values outside QC limits

LCS/LCSD spike added values have been weight adjusted.

Non-spike result of "0" used in place of "U" to allow calculation of spike recovery.

Comments: _____

PCB SOIL
LABORATORY CONTROL SAMPLE/DUPLICATE
PERCENT RECOVERY

Instrument ID: M

GC Column #1: STX-CLPesticides I

Column ID: 0.25 mm

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

SDG: 68266

Non-spiked sample: B110810PSOX,RR,,A/C

Spike: L110810PSOX,,A/C

Spike duplicate: LD110810PSOX,,A/C

COMPOUND	LCS SPIKE	LCSD SPIKE	LOWER	UPPER	RPD	NON-SPIKE	SPIKE	SPIKE	#	SPIKE DUP	SPIKE DUP	#	RPD	#
	ADDED (ug/kg)	ADDED (ug/kg)	LIMIT	LIMIT	LIMIT	RESULT (ug/kg)	RESULT (ug/kg)	% REC		RESULT (ug/kg)	% REC			
PCB 1016	200	200	65	140	30	0	224	112		226	113		0.9	
PCB 1260	200	200	60	130	30	0	180	90		197	99		9.0	
PCB 1016 #2	200	200	65	140	30	0	235	117		237	119		1.0	
PCB 1260 #2	200	200	60	130	30	0	158	79		185	93		15.5	

Column to be used to flag recovery and RPD values outside of QC limits

* Values outside QC limits

LCS/LCSD spike added values have been weight adjusted.

Non-spike result of "0" used in place of "U" to allow calculation of spike recovery.

Comments: _____

CHAIN OF CUSTODIES

Chain Of Custody Form

analytix environmental laboratory LLC 195 Commerce Way Suite E Portsmouth, NH 03801 Phone (603) 436-5111 Fax (603) 430-2151		For Analytics Use Only Rev. 5/06/18/08	
Project#: 222822 Proj. Name: <u>UMaine Stewart Comm</u> Company: <u>Woodard & Curran</u> Contact: <u>Amy Wallace, Jeff Hamel</u> Address: <u>35 New England Business Center Suite 180</u> <u>Andover, MA 01810</u>		Samples were: 1) Shipped or hand-delivered <u>4°C</u> 2) Temp blank °C <u>4°C</u> 3) Received in good condition <u>Y</u> or <u>N</u> 4) pH checked by: <u>NA</u> 5) Labels checked by: <u>8/11/10</u>	
Matrix Key: C = Concrete WP = Waste Water SW = Surface Water GW = Groundwater DW = Drinking Water S = Soil/Sludge O = Oil E = Extract X = Other		Container Key: P = plastic G = glass	
Preservation Unpres <input type="checkbox"/> H ₂ O ₂ <input type="checkbox"/> HCl <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Methanol <input type="checkbox"/> Other <input type="checkbox"/>		Report Type: MCP* <input type="checkbox"/> Level II* <input checked="" type="checkbox"/> CTCP* <input type="checkbox"/> Level III* <input type="checkbox"/> DOD* <input type="checkbox"/> Level IV* <input type="checkbox"/> <input type="checkbox"/> Standard	
Station Identification UMSC-CBS-013 UMSC-CBS-014 UMSC-CBS-015 UMSC-CBS-016 UMSC-CBS-017 UMSC-CBS-018 UMSC-CBS-019 UMSC-CBS-020 UMSC-CBS-021 UMSC-CBS-022 UMSC-CBS-025		Sample Date 11/4/10 12:02 12:12 12:14 12:31 12:43 12:52 13:02 13:48 13:48 15:15 15:44	
Sample Time 12:02 12:12 12:14 12:31 12:43 12:52 13:02 13:48 13:48 15:15 15:44		Analysis RB's 8/18/2 WSOXLET → → → → → → → → → →	
Comments / Instructions: Email Results to: <u>awallace@woodardcurran.com</u>		Project Requirements: *Fee may apply	
Turnaround Time (TAT) <input type="checkbox"/> 24hr* <input type="checkbox"/> 48hr* <input checked="" type="checkbox"/> 5 Days* <input type="checkbox"/> 72hr* <input type="checkbox"/> 10 Days		State Standard: (eg. S-1 or GW-1) EDD Required: <u>Y*</u> <u>N</u> Type: <u>PDF</u>	
Relinquished By: <u>[Signature]</u> Date: <u>11/5/10</u> Time: <u>11:08</u>		Relinquished By: <u>[Signature]</u> Date: <u>11/5/10</u> Time: <u>11:08</u>	
Relinquished By: <u>[Signature]</u> Date: <u>11/5/10</u> Time: <u>11:08</u>		Relinquished By: <u>[Signature]</u> Date: <u>11/5/10</u> Time: <u>11:08</u>	

Chain Of Custody Form

analytics environmental laboratory LLC 195 Commerce Way Suite E Portsmouth, NH 03801 Phone (603) 436-5111 Fax (603) 430-2151		For Analytics Use Only Rev. 5/06/18/08	
Project#: 222822 Proj. Name: <i>UMaine Stewart Commons</i> Company: Woodard & Curran Contact: <i>Amy Walker, Jeff Hannel</i> Address: 35 New England Business Center Suite 180 Andover, MA 01810		Samples were: 1) Shipped or hand-delivered 2) Temp blank °C <i>4°C</i> 3) Received in good condition for N <i>11/15/10</i> 4) pH checked by: <i>11/15/10</i> 5) Labels checked by: <i>11/15/10</i>	
Matrix Key: C = Concrete WP = Waste WW = Wastewater SW = Surface Water GW = Groundwater DW = Drinking Water S = Soil/Sludge O = Oil E = Extract X = Other		Container Key P=plastic G=glass	
Preservation Matrix Key: C = Concrete WP = Waste WW = Wastewater SW = Surface Water GW = Groundwater DW = Drinking Water S = Soil/Sludge O = Oil E = Extract X = Other		Container number/type Matrix Other Methanol HCL H ₂ SO ₄ HNO ₃ 4°C Unpres	
Station Identification Sampler (Signature): <i>[Signature]</i>		Analysis Sample Date Sample Time Quote #	
UMSC-CBL-027 UMSC-CBB-038 UMSC-CBB-029 UMSC-CWG-030 UMSC-CWG-031 UMSC-CWG-032 UMSC-CWG-033 UMSC-ACBS-034		11/4/10 16:18 16:40 16:55 17:16 17:17 17:24 17:25 17:35	
Comments / Instructions <i>* Tested neg. for Cl w/PT paper</i> <i>DO NOT RUN as Balance</i> <i>Sample per Amy Wallace</i> <i>11/15/10</i>		Project Requirements: *Fee may apply Report Type: MCP* <input checked="" type="checkbox"/> Level II* CTCP* <input type="checkbox"/> Level III* DOD* <input type="checkbox"/> Level IV* Standard <input type="checkbox"/> State: NH <input type="checkbox"/> MA <input type="checkbox"/> ME <input checked="" type="checkbox"/> CT <input type="checkbox"/> RI <input type="checkbox"/> Other:	
Email Results to: Turnaround Time (TAT) <input type="checkbox"/> 24hr* <input type="checkbox"/> 48hr* <input checked="" type="checkbox"/> 5 Days* <input type="checkbox"/> 72hr* <input type="checkbox"/> 10 Days		Relinquished By: <i>[Signature]</i> Date: <i>11/15/10</i> Time: <i>11:08</i> Relinquished By: <i>[Signature]</i> Date: <i>11/15/10</i> Time: <i>11:08</i> Relinquished By: <i>[Signature]</i> Date: <i>11/15/10</i> Time: <i>11:08</i>	

ANALYTICS SAMPLE RECEIPT CHECKLIST



AEL LAB#: 68266
 CLIENT: WOODARD
 PROJECT: UMAINE STEWART Commons

COOLER NUMBER: NA
 NUMBER OF COOLERS: 1
 DATE RECEIVED: 11/5/10

A: PRELIMINARY EXAMINATION:

DATE COOLER OPENED: 11/5/10

1. Cooler received by (initials): Wu

Date Received: 11/5/10

2. Circle one:

Hand delivered
(If so, skip 3)

Shipped

3. Did cooler come with a shipping slip?

Y

☒ N

3a. Enter carrier name and airbill number here:

4. Were custody seals on the outside of cooler?

Y

☒ N

How many & where: — Seal Date: —

Seal Name: —

5. Did the custody seals arrive unbroken and intact upon arrival?

Y

NA

6. COC#:

7. Were Custody papers filled out properly (ink, signed, etc)?

☒ Y

N

8. Were custody papers sealed in a plastic bag?

Y

☒ N

9. Did you sign the COC in the appropriate place?

☒ Y

N

10. Was the project identifiable from the COC papers?

☒ Y

N

11. Was enough ice used to chill the cooler?

☒ N

Temp. of cooler:

4°C

B. Log-In: Date samples were logged in:

11/5/10

By: Wu

12. Type of packing in cooler (bubble wrap, popcorn)

Y

☒ N

13. Were all bottles sealed in separate plastic bags?

Y

☒ N

14. Did all bottles arrive unbroken and were labels in good condition?

☒ Y

N

15. Were all bottle labels complete (ID, Date, time, etc.)

☒ Y

N

16. Did all bottle labels agree with custody papers?

☒ Y

N

17. Were the correct containers used for the tests indicated:

☒ Y

N

18. Were samples received at the correct pH?

Y

NA

19. Was sufficient amount of sample sent for the tests indicated?

☒ Y

N

20. Were bubbles absent in VOA samples?

Y

NA

If NO, List Sample ID's and Lab #s:

21. Laboratory labeling verified by (initials):

JB

Date:

11/5/10

November 23, 2010

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

**RE: Analytical Results Case Narrative
Analytics # 68380
University of Maine Stewart Commons Proj# 222822**

Dear Ms. Wallace;

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

- Case Narrative/Non-Conformance Summary
- Sample Log Sheet - Cover Page
- PCB Form 1 Data Sheet for Samples and Blanks
- Chromatograms
- PCB Form 10 Confirmation Results
- PCB Form 3 MS/MSD (LCS) Recoveries
- Chain of Custody (COC) Forms

QC NON-CONFORMANCE SUMMARY

Sample Receipt:

No exceptions.

PCBs by EPA Method 8082:

Sample 68380-1 required dilution due to the concentration of PCB 1254 detected in the sample.

The MS/MSD analyzed on sample 68380-1 had high recoveries for PCB 1260 due to the presence of PCB 1254 in the parent sample. The laboratory control samples (L111610PSOX/LD111610PSOX) were in control. Results were reported without qualification.

If you have any questions on these results, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC



Stephen L. Knollmeyer
Laboratory Director

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

Report Number: 68380

Revision: Rev. 0

Re: UMaine Stewart Commons (Project No: 222822)

Enclosed are the results of the analyses on your sample(s). Samples were received on 05 November 2010 and analyzed for the tests listed. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
68380-1	11/14/10	UMSC-CBC-023	EPA 8082 (PCBs only)	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, Virginia, Maryland, and is accredited by the Department of Defense (DOD) ELAP program. A list of actual certified parameters is available upon request.

If you have any questions on these results, please do not hesitate to contact us.

Authorized signature


Stephen L. Knollmeyer Lab. Director

Date

11/23/2010

This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.

Surrogate Compound Limits

	Matrix: Units:	Aqueous % Recovery	Solid % Recovery	Method
Volatile Organic Compounds - Drinking Water				
1,4-Difluorobenzene		70-130		EPA 524.2
Bromofluorobenzene		70-130		
1,2-Dichlorobenzene-d4		70-130		
Volatile Organic Compounds				
1,2-Dichloroethane-d4		70-120	70-120	EPA 624/8260B
Toluene-d8		85-120	85-120	
Bromofluorobenzene		75-120	75-120	
Semi-Volatile Organic Compounds				
2-Fluorophenol		20-110	35-105	EPA 625/8270C
d5-Phenol		15-110	40-100	
d5-nitrobenzene		40-110	35-100	
2-Fluorobiphenyl		50-110	45-105	
2,4,6-Tribromophenol		40-110	40-125	
d14-p-terphenyl		50-130	30-125	
PAH's by SIM				
d5-nitrobenzene		21-110	35-110	EPA 8270C
2-Fluorobiphenyl		36-121	45-105	
d14-p-terphenyl		33-141	30-125	
Pesticides and PCBs				
2,4,5,6-Tetrachloro-m-xylene (TCX)		46-122	40-130	EPA 608/8082
Decachlorobiphenyl (DCB)		40-135	40-130	
Herbicides				
Dichloroacetic acid (DCAA)		30-150	30-150	
Gasoline Range Organics/TPH Gasoline				
Trifluorotoluene TFT (FID)		60-140	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)		60-140	60-140	
Trifluorotoluene TFT (PID)		60-140	60-140	
Bromofluorobenzene (BFB) (PID)		60-140	60-140	
Diesel Range Organics/TPH Diesel				
m-terphenyl		60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH
Volatile Petroleum Hydrocarbons				
2,5-Dibromotoluene (PID)		70-130	70-130	MADEP VPH May 2004 Rev1.1
2,5-Dibromotoluene (FID)		70-130	70-130	
Extracatable Petroleum Hydrocarbons				
1-chloro-octadecane (aliphatic)		40-140	40-140	MADEP EPH May 2004 Rev1.1
o-Terphenyl (aromatic)		40-140	40-140	
2-Fluorobiphenyl (Fractionation)		40-140	40-140	
2-Bromonaphthalene (fractionation)		40-140	40-140	

PCB DATA SUMMARIES

Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

November 24, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: Lab QC

Lab Sample ID: B111910PSOX
Matrix: Soil
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date:
Lab Receipt Date:
Extraction Date: 11/19/10
Analysis Date: 11/22/10

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	U
PCB-1260	33	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	94	%
Decachlorobiphenyl	63	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

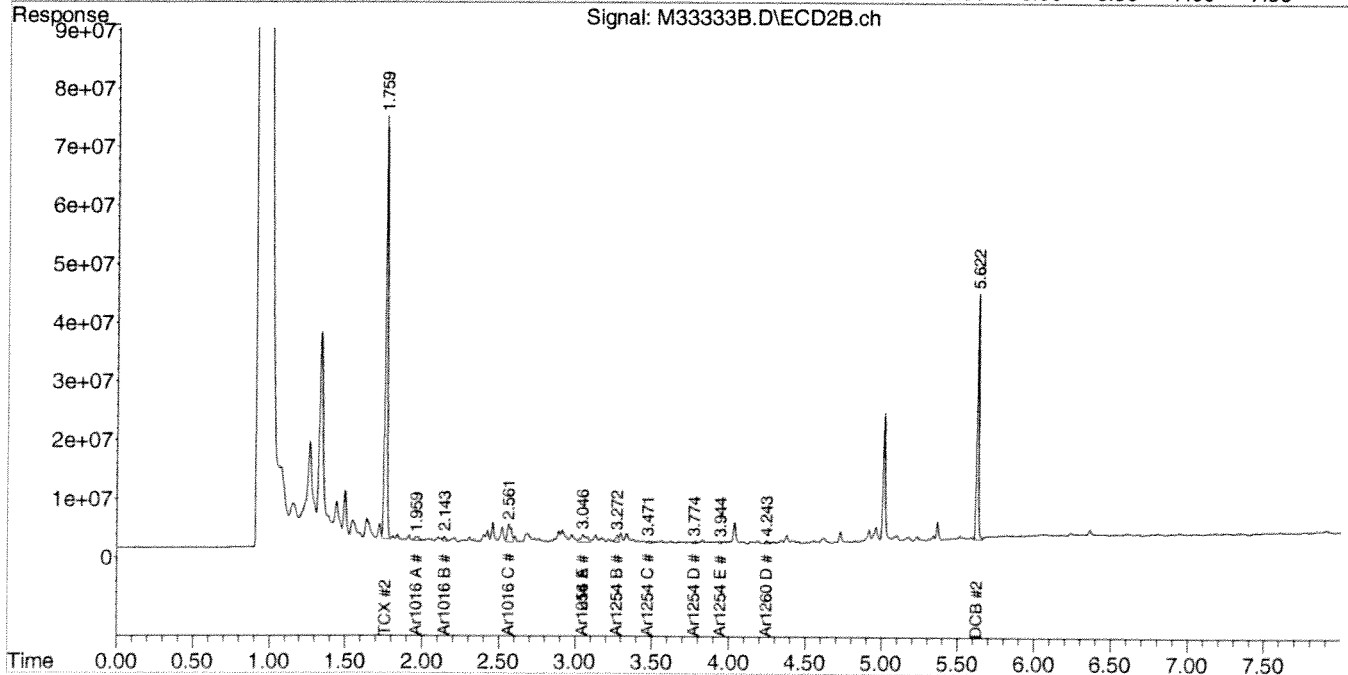
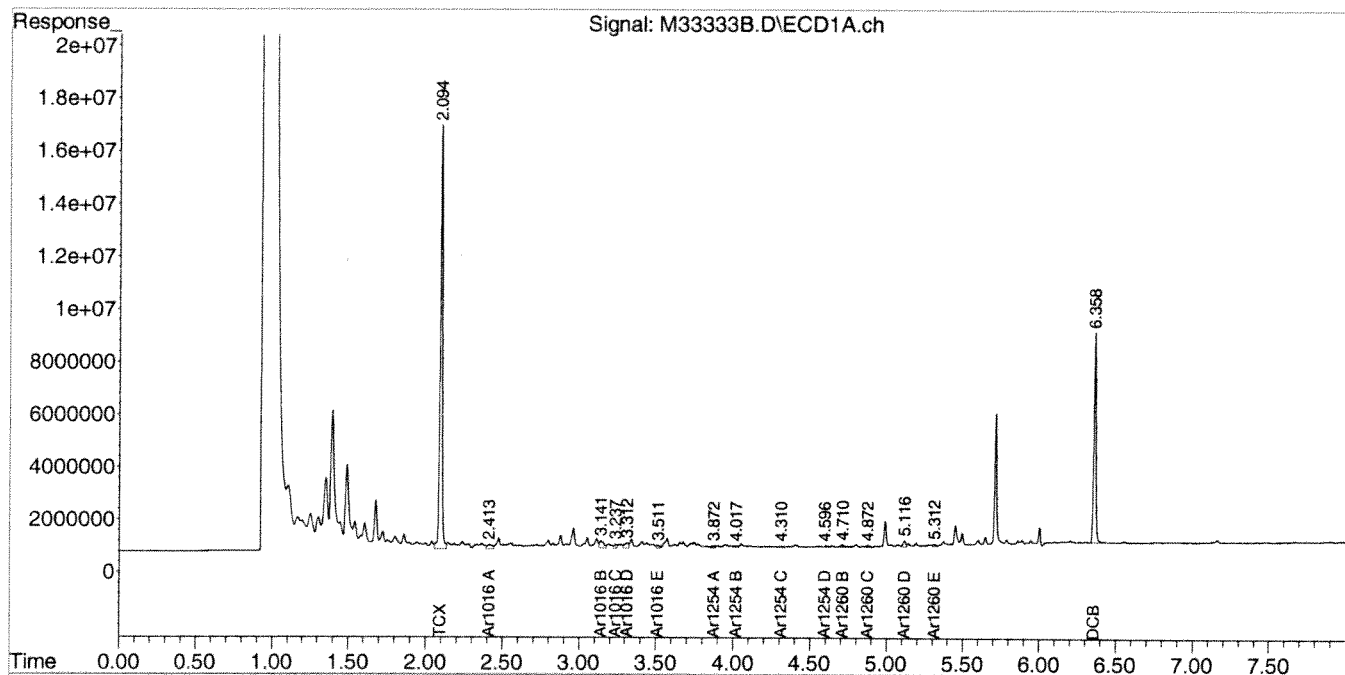
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Data Path : C:\msdchem\1\DATA\112210-M\
Data File : M33333B.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 22 Nov 2010 11:47 am
Operator : JK
Sample : B111910PSOX,,A/C
Misc : SOIL
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 22 14:39:08 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:48:45 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



Ms. Amy Wallace
Woodard & Curran
35 NE Business Center Suite 180
Andover MA 01810

November 24, 2010

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: UMaine Stewart Commons
Project Number: 222822
Field Sample ID: UMSC-CBC-023

Lab Sample ID: 68380-1
Matrix: Solid
Percent Solid: 99
Dilution Factor: 5.0
Collection Date: 11/14/10
Lab Receipt Date: 11/05/10
Extraction Date: 11/16/10
Analysis Date: 11/22/10

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	170	U
PCB-1221	170	U
PCB-1232	170	U
PCB-1242	170	U
PCB-1248	170	U
PCB-1254	170	2190
PCB-1260	170	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	69	%
Decachlorobiphenyl	57	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 68380
GC Column #1: STX-CLPesticides I	Sample: 68380-1,1:5,,A/C
Column ID: 0.25 mm	Data File: M33351.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 5.0
Column ID: 0.25 mm	

Column #1		Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	2195	2121	3.4	

Column to be used to flag RPD values greater than QC limit of 40%

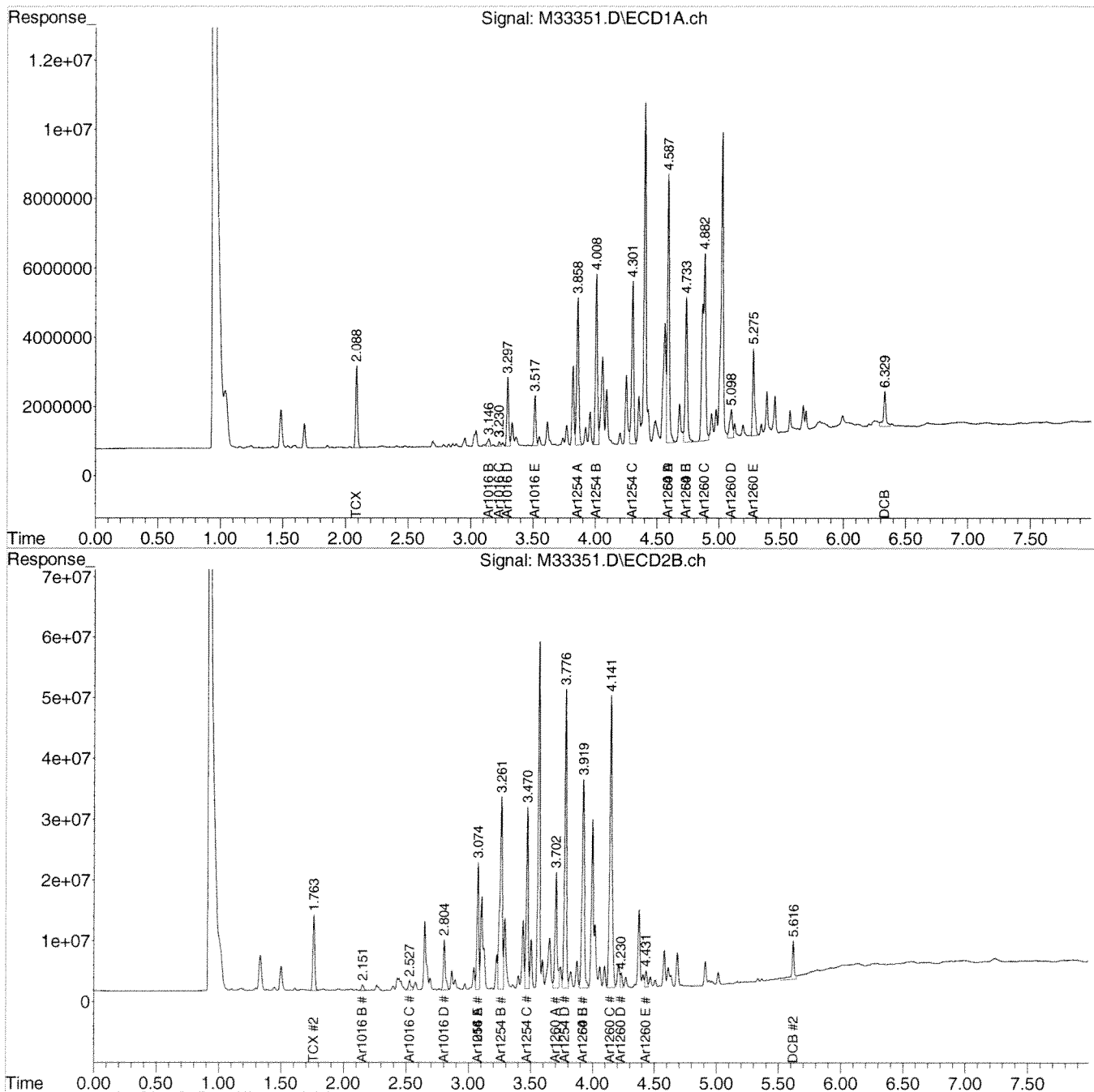
* Values outside QC limits

Comments: _____

Data Path : C:\msdchem\1\DATA\112210-M\
Data File : M33351.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 22 Nov 2010 3:14 pm
Operator : JK
Sample : 68380-1,1:5,,A/C
Misc : SOIL
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Nov 22 15:22:56 2010
Quant Method : C:\msdchem\1\METHODS\PCB110310.M
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254
QLast Update : Wed Nov 03 16:47:44 2010
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 2 uL
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



PCB QC FORMS

PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M
GC Column #1: STX-CLPesticides I
Column ID: 0.25 mm
GC Column #2: STX-CLPesticides II
Column ID: 0.25 mm

SDG: 68380

[illegible]

	Lower Limit	Upper Limit
SMC #1 = TCX	40	130
SMC #2 = DCB	40	130

Column to be used to flag recovery values outside of QC limits
* Values outside QC limits
D System Monitoring Compound diluted out

PCB SOIL
LABORATORY CONTROL SAMPLE/DUPLICATE
PERCENT RECOVERY

Instrument ID: M

GC Column #1: STX-CLPesticides I

Column ID: 0.25 mm

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

SDG: 68380

Non-spiked sample: B111610PSOX,,A/C

Spike: L111610PSOX,,A/C

Spike duplicate: LD111610PSOX,,A/C

COMPOUND	LCS SPIKE ADDED (ug/kg)	LCSD SPIKE ADDED (ug/kg)	LOWER LIMIT	UPPER LIMIT	RPD LIMIT	NON-SPIKE RESULT (ug/kg)	SPIKE RESULT (ug/kg)	SPIKE % REC	SPIKE #	SPIKE DUP RESULT (ug/kg)	SPIKE DUP % REC	SPIKE DUP #	RPD LIMIT	RPD #
PCB 1016	200	200	65	140	30	0	195	98		190	95		2.9	
PCB 1260	200	200	60	130	30	0	192	96		191	95		0.6	
PCB 1016 #2	200	200	65	140	30	0	219	109		213	106		2.6	
PCB 1260 #2	200	200	60	130	30	0	182	91		178	89		2.0	

Column to be used to flag recovery and RPD values outside of QC limits

* Values outside QC limits

LCS/LCSD spike added values have been weight adjusted.

Non-spike result of "0" used in place of "U" to allow calculation of spike recovery.

Comments: _____

PCB SOIL
MATRIX SPIKE/DUPLICATE
PERCENT RECOVERY

Instrument ID: M

GC Column #1: STX-CLPesticides I

Column ID: 0.25 mm

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

SDG: 68380

Non-spiked sample: 68380-1,,A/C

Spike: 68380-1,MS,,A/C

Spike duplicate: 68380-1,MSD,,A/C

COMPOUND	LCS SPIKE ADDED (ug/kg)	LCSD SPIKE ADDED (ug/kg)	LOWER LIMIT	UPPER LIMIT	RPD LIMIT	NON-SPIKE RESULT (ug/kg)	SPIKE RESULT (ug/kg)	SPIKE % REC	SPIKE #	SPIKE DUP RESULT (ug/kg)	SPIKE DUP % REC	SPIKE DUP #	RPD	#
PCB 1016	199	198	65	140	30	0	240	120		245	123		2.1	
PCB 1260	199	198	60	130	30	0	1702	854	*	1849	932	*	8.2	
PCB 1016 #2	199	198	65	140	30	0	252	126		268	135		6.4	
PCB 1260 #2	199	198	60	130	30	0	1045	524	*	1118	563	*	6.7	

Column to be used to flag recovery and RPD values outside of QC limits

* Values outside QC limits

LCS/LCSD spike added values have been weight adjusted.

Non-spike result of "0" used in place of "U" to allow calculation of spike recovery.

Comments: _____

CHAIN OF CUSTODIES

analytical environmental laboratory LLC		195 Commerce Way Suite E Portsmouth, NH 03801 Phone (603) 436-5111 Fax (603) 430-2151	
Project#: 222 822 Company: Woodward & Curran Contact: Amy Wallace, Jeff Harnel Address: 35 New England Business Center Suite 180 Andover, MA 01810	Proj. Name: UMaine Stewart Commencement PO# Quote #	Matrix Key: C = Concrete WP = Wipes SW = Surface Water GW = Groundwater DW = Drinking Water S = Soil/Sludge O = Oil E = Extract X = Other	
Station Identification VMSC - CBL - 023 VMSC - CBL - 024 VMSC - CBL - 026	Sample Date 11/4/10 11/5/10 11/6/10	Sample Time 15:22 15:38 16:10	Analysis PCBs, 8082 w/ 50x44 ET Extraction
Preservation Unpres 4° C HNO ₃ H ₂ SO ₄ HCL Methanol Other		Container number/type C 1 G C 1 G C 1 G	pH 6.8380 - 1
Container Key P=plastic G=glass		Received By: <i>[Signature]</i> Date: 11/5/10 Time: 11:08	
Received By: <i>[Signature]</i> Date: 11/5/10 Time: 11:08		Received By: <i>[Signature]</i> Date: 11/5/10 Time: 11:08	

Samples were: 1) Shipped on hand-delivered 2) Temp blank °C 4° 3) Received in good condition N 4) pH checked by: N/A 5) Labels checked by: Jm 11.16.10		Project Requirements: *Fee may apply
Report Type: <input type="checkbox"/> MCP+ <input type="checkbox"/> CTROP+ <input type="checkbox"/> DOD+ <input type="checkbox"/> Standard	State: <input type="checkbox"/> NH <input type="checkbox"/> MA <input checked="" type="checkbox"/> ME <input type="checkbox"/> CT <input type="checkbox"/> RI Other:	State Standard: (eg. S-1 or GW-1) EDD Required: Y* N Type:

Comments / Instructions:
 Please Hold Samples on this sheet. Do not analyze until requested by WRC.
 Run VMSC-CBL-023 as per AW's email, all others on hold.

Email Results to: amy.wallace@woodwardcurran.com	Turnaround Time (TAT) <input type="checkbox"/> 24hr* <input type="checkbox"/> 48hr* <input checked="" type="checkbox"/> 5 Days* <input type="checkbox"/> 10 Days
---	--

ANALYTICS SAMPLE RECEIPT CHECKLIST

AEL LAB#: 68380COOLER NUMBER: N/ACLIENT: WOODARDNUMBER OF COOLERS: 1PROJECT: UMAINE STEWART CommonsDATE RECEIVED: 11/5/10

A: PRELIMINARY EXAMINATION:

DATE COOLER OPENED: 11/5/101. Cooler received by(initials): WADate Received: 11/5/10

2. Circle one:

Hand delivered
(if so, skip 3)

Shipped

3. Did cooler come with a shipping slip?

Y

NA

3a. Enter carrier name and airbill number here:

N/A

4. Were custody seals on the outside of cooler?

Y

N

How many & where: _____ Seal Date: _____

Seal Name: _____

5. Did the custody seals arrive unbroken and intact upon arrival?

Y

NA

6. COC#:

N/A

7. Were Custody papers filled out properly (ink, signed, etc)?

Y

N

8. Were custody papers sealed in a plastic bag?

Y

N

9. Did you sign the COC in the appropriate place?

Y

N

10. Was the project identifiable from the COC papers?

Y

N

11. Was enough ice used to chill the cooler?

N

N

Temp. of cooler:

4°C

B. Log-In: Date samples were logged in:

11/5/10

By:

WA

12. Type of packing in cooler(bubble wrap, popcorn)

Y

N

13. Were all bottles sealed in separate plastic bags?

Y

N

14. Did all bottles arrive unbroken and were labels in good condition?

Y

N

15. Were all bottle labels complete(ID, Date, time, etc.)

Y

N

16. Did all bottle labels agree with custody papers?

Y

N

17. Were the correct containers used for the tests indicated:

Y

N

18. Were samples received at the correct pH?

Y

NA

19. Was sufficient amount of sample sent for the tests indicated?

Y

N

20. Were bubbles absent in VOA samples?

Y

NA

If NO, List Sample ID's and Lab #s: _____

21. Laboratory labeling verified by (initials):

JuDate: 11.16.10

APPENDIX B: WRITTEN CERTIFICATION



Certification

The undersigned owner of the property where the cleanup site is located and the party conducting the cleanup certify that all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file at the location indicated below and are available for EPA inspection, as set forth below.

Document Location

University of Maine
Facilities Management
5765 Service Building
Orono, Maine 04469-5765

Property Owner and Party Conducting the Cleanup

Carolyn McDonough

Authorized Signature

3/18/11

Date

Carolyn McDonough

Name of Authorized Representative (Print)

Associate Director of Facilities for Planning, Design & Construction

Title